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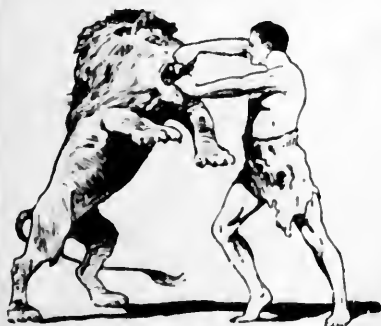
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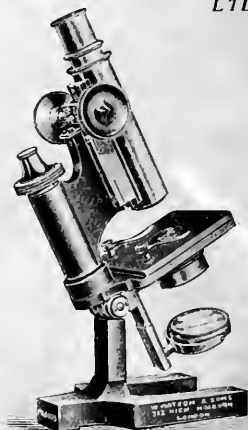
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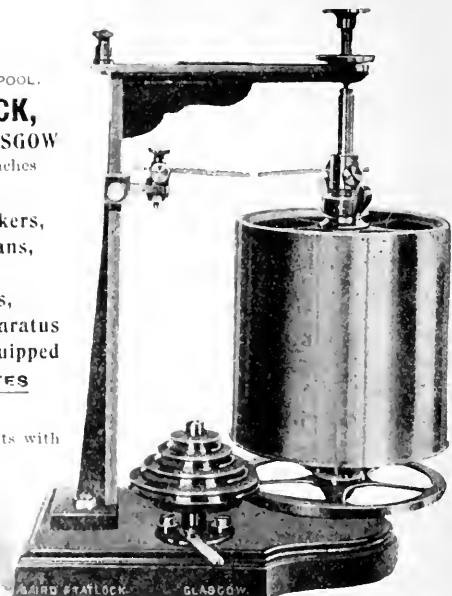
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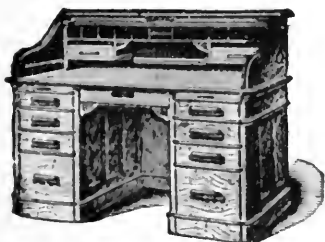
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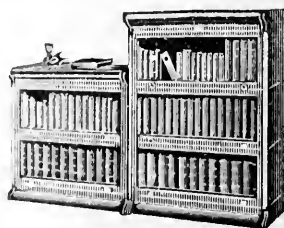
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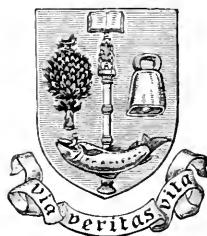
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## AUGUST 1907.

1	Th
2	F
3	S
4	S
5	M
6	Tu
7	W
8	Th
9	F
10	S
11	S
12	M
13	Tu
14	W
15	Th
16	F
17	S
18	S
19	M
20	Tu
21	W
22	Th
23	F
24	S
25	S
26	M
27	Tu
28	W
29	Th
30	F
31	S

Names of Candidates for Highland Society's Bursaries to be given in as directed on pp. 436, 437.

## SEPTEMBER 1907.

1	\$	{ Names of Candidates for A. and B. Stewart Bursaries, for Bursaries in the gift of the Merchants' House, for Hutchesons' Educational Trust Bursaries, for Glasgow City Educational Endowments Bursaries, for James Laing Bursaries, for Marshall Trust Bursaries, for Pratt Bursary, for William Whyte Bursary, and for Hannay Bursary to be given in as directed at pp. 380, 437, 431, 432. Names of Candidates for Ferguson Scholarships to be given in before this day.
2	M	
3	Tu	
4	W	
5	Th	
6	F	{ Names of Candidates for Preliminary Examination in Arts, Science, and Medicine, and Names of Competitors for Bursaries, to be given in to Assistant-Clerk (Matriculation Office).
7	S	
8	\$	
9	M	
10	Tu	
11	W	{ Names of Candidates for First, Second, and Third Professional Examinations in Medicine, for B.Sc. Examinations in Science, and for Certificate in Engineering Science, to be given in to Assistant-Clerk (Matriculation Office).
12	Th	
13	F	
14	S	
15	\$	
16	M	{ Names of Candidates for Degrees in Arts and Law, and for Scholarships, etc., to be given in to Assistant-Clerk (Matriculation Office).
17	Tu	
18	W	
19	Th	
20	F	
21	S	{ Preliminary and Bursary Examinations begin. (See pp. 218, 435.) Degree Examinations—Mathematics (Ord. and Hon.).
22	\$	
23	M	
24	Tu	
25	W	
26	Th	{ Degree Examinations—History (Hon.), Mathematics (Hon.), Astronomy, Botany, Chemistry, Materia Medica, Engineering Laboratory, Electrical Engineering, Constitutional Law, Civil (or Roman) Law. Competition for Lorimer Bursaries in Medicine. (Continued on 1st Oct.)
27	F	
28	S	
29	\$	
30	M	



## OCTOBER 1907.

1	Tu	{ Degree Examinations—Moral Philosophy (Ord. and Hon.), History (Hon.), Zoology, Physics, Anatomy, Physiology, Pathology, Public Health Laboratory, Engineering Drawing, Mining, Naval Architecture, Ship Design, Scots Law, Public International Law.
2	W	{ Degree Examinations—Logic (Ord. and Hon.), History (Hon.), Political Economy, Economic Science (Agric.), Engineering, Electrical Engineering, Medical Jurisprudence and Public Health, Public Health Laboratory, Vital Statistics, Sanitary Law, Philosophy of Law, International Private Law.
3	Th	{ Meeting of University Court. Appointment of Preliminary Examiners and Members of Joint Board for next year. Appointment of Committees and of Representatives at Charitable and other Boards. Degree Examinations—History (Ord. and Hon.), English Literature (Hon.), Mental Philosophy (Hon.), Engineering, Mining, Medicine in relation to Public Health, Practical Sanitation, Conveyancing, Forensic Medicine. Preliminary Examinations end. Additional Examinations in German and French for Bursaries.
4	F	{ Degree Examinations—Natural Philosophy (Ord. and Hon.), English Literature (Hon.), German (Hon.), Agriculture, Agricultural Entomology, Mercantile Law. Examination for Arnott Prizes at 2 P.M. Additional Examinations in Mathematics, Latin, and Greek for Bursaries.
5	S	{ Degree Examinations—English Literature (Ord. and Hon.), French (Hon.), Classics (Hon.), Latin (Ord.), Geology, Veterinary Hygiene, Metallurgy. Additional Examination in Dynamics for Bursaries.
6	S	
7	M	{ Degree Examinations—Latin (Ord. and Hon.), English Literature (Hon.), Geology (Practical), Geology, Natural Philosophy (Hon.).
8	Tu	{ Degree Examinations—German (Ord. and Hon.), English Literature (Hon.).
9	W	{ Degree Examinations—French (Ord. and Hon.).
10	Th	{ Degree Examinations—Greek (Ord. and Hon.). Meeting of Classical and Modern Languages Committees of Joint Board.
11	F	{ Meeting of Joint Board. Degree Examinations—Hebrew (Arts), Celtic.
12	S	{ Meeting of Joint Board.
13	S	
14	M	
15	Tu	
16	W	{ Matriculation begins. Names of Candidates for Degree of B.D. and for Bursaries, etc., in Theology to be given in to Assistant-Clerk (Matriculation Office). Results of Bursary Competition declared.
17	Th	{ Opening of Winter Session. [Committees. Meeting of Senate—Election of Senate Members of Library and other
18	F	
19	S	
20	S	
21	M	
22	Tu	{ Examinations for B.D., and for Bursaries in Theology, 1st day. (See pp. 303, [440.]
23	W	{ Do. do., 2nd day.
24	Th	
25	F	
26	S	
27	S	
28	M	
29	Tu	
30	W	{ (Last Wednesday.) Meeting of General Council.
31	Th	{ Applications for admission as Research Students to be lodged with the Clerk of Senate. Last day for giving in University Prize Essays.

## NOVEMBER 1907.

1	F	Close of Matriculation and of Enrolment in Classes.
2	S	
3	S	
4	M	{ Names of Candidates for Diploma in Education to be given in to Assistant-Clerk (Matriculation Office).
5	Tu	
6	W	
7	Th	{ Meeting of Senate. Graduation. Snell Examiners appointed. Representatives at Charitable and other Boards elected.
8	F	
9	S	
10	S	
11	M	
12	Tu	
13	W	
14	Th	Meeting of University Court.
15	F	Examination for Diploma in Education.
16	S	
17	S	
18	M	
19	Tu	
20	W	
21	Th	

## NOVEMBER 1907.

22	F	
23	S	
24	S	
25	M	
26	Tu	
27	W	
28	Th	
29	F	
30	S	

## DECEMBER 1907.

1	S	
2	M	
3	Tu	
4	W	
5	Th	Meeting of Senate. Vacancies in Bursaries ascertained.
6	F	
7	S	
8	S	
9	M	
10	Tu	
11	W	
12	Th	{ Meeting of the University Court. Appointment of Director of Samaritan Hospital, Director of Eye Infirmary, and Member of Committee of West of Scotland Marine Biological Association.
13	F	
14	S	
15	S	
16	M	
17	Tu	
18	W	
19	Th	
20	F	
21	S	
22	S	
23	M	Christmas Holidays commence.
24	Tu	
25	W	
26	Th	
27	F	
28	S	
29	S	
30	M	
31	Tu	

## JANUARY 1908.

1	W	
2	Th	
3	F	
4	S	
5	S	
6	M	
7	Tu	First day on which the Classes meet after the Christmas Holidays.
8	W	
9	Th	{ Meeting of Senate. Intimation from the several Faculties of the Election of Deans. Appointment of Principal and Deans Committee. Appointment of Boards of Studies. Vacant Bursaries filled up. Report by Faculty of Arts on Logan Medal.
10	F	{ Applications for Higher Degrees in Arts and Science (D.Litt., D.Phil., and D.Sc.) to be sent in to Clerk of Senate.
11	S	
12	S	
13	M	
14	Tu	
15	W	
16	Th	Meeting of University Court.
17	F	Close of Enrolment in Classes which begin after Christmas Holidays.
18	S	
19	S	
20	M	
21	Tu	
22	W	
23	Th	
24	F	
25	S	
26	S	
27	M	
28	Tu	
29	W	
30	Th	
31	F	

## FEBRUARY 1908.

1	S	Theses for M.D. to be sent in.
2	S	
3	M	Holiday (Monday after last Friday of January).
4	Tu	Holiday (for Candlemas).
5	W	
6	Th	{ Meeting of Senate. Reports of Committees on Honorary Degrees. Arrangements for Summer Session.
7	F	
8	S	
9	S	
10	M	
11	Tu	
12	W	
13	Th	{ (Second Thursday.) Meeting of University Court. Arrangements for Summer Session.
14	F	
15	S	
16	S	
17	M	
18	Tu	
19	W	
20	Th	
21	F	
22	S	
23	S	
24	M	
25	Tu	
26	W	
27	Th	
28	F	Reports on Prize Essays.
29	S	

## MARCH 1908.

1	S	
2	M	Holiday (Monday after last Friday of February).
3	Tu	
4	W	
5	Th	{ Meeting of Senate.
6	F	{ Schemes of Courses in Arts, Science, and Medicine to be sent by Professors and Lecturers to Conveners of Boards of Studies.
7	S	{ Names of Candidates for Preliminary Examinations in Arts, Science, and Medicine, to be given in to Assistant-Clerk (Matriculation Office).
8	S	
9	M	
10	Tu	{ Names of Candidates for Degrees in Arts and Law to be given in to Assistant-Clerk (Matriculation Office).
11	W	
12	Th	{ Names of Candidates for First, Second, and Third Professional Examinations in Medicine, for B.Sc. Examinations in Science, and for Certificate in Engineering Science, to be given in to Assistant-Clerk (Matriculation Office).
13	F	{ Meeting of University Court.
14	S	
15	S	
16	M	
17	Tu	
18	W	
19	Th	{ Meeting of Senate. Election of Commissioner to General Assembly. Nomination to 1851 Exhibition Research Scholarship.
20	F	Report on College Buildings by the Master of Works.
21	S	
22	S	
23	M	
24	Tu	
25	W	Meeting of Standing Committee of Senate on University Union.
26	Th	Close of Winter Session.
27	F	{ Names of Candidates for Degree of B.D. to be given in to Assistant-Clerk (Matriculation Office).
28	S	{ Preliminary Examinations in Arts, Science, and Medicine begin. (See p. 218.)
29	S	{ Degree Examination—Mathematics (Ord. and Hon.).
30	M	{ Degree Examinations—Education, Astronomy, Geology (Practical), Geology.
31	Tu	{ Returns from Teachers of Elocution.
		{ Degree Examinations—History (Hon.), Mathematics (Hon.), Astronomy, Botany, Chemistry, Materia Medica, Engineering Laboratory (Special), Electrical Engineering (Junior), Geology, Constitutional Law, Civil (or Roman) Law.
		{ Degree Examinations—Moral Philosophy (Ord. and Hon.), History (Hon.), Zoology, Physics, Anatomy, Physiology, Pathology, Public Health Laboratory, Engineering Drawing, Mining, Naval Architecture, Ship Design, Scots Law, Public International Law.

## APRIL 1908.

1	W	{ (First Wednesday.) Meeting of General Council. Degree Examinations—Logic (Ord. and Hon.), History (Hon.), Political Economy, Economic Science (Agric.), Engineering, Electrical Engineering (Senior), Medical Jurisprudence and Public Health, Vital Statistics, Public Health Laboratory, Sanitary Law, Philosophy of Law, International Private Law.
2	Th	{ Degree Examinations—History (Ord. and Hon.), English Literature (Hon.), Mental Philosophy (Hon.), Engineering, Mining, Medicine in relation to Public Health, Practical Sanitation, Conveyancing, Forensic Medicine, Hebrew, Divinity, Textual Criticism.
3	F	{ Preliminary Examinations end. Degree Examinations—Natural Philosophy (Ord. and Hon.), English Literature (Hon.), German (Hon.), Agriculture, Agric. Entomology, Mercantile Law, Apologetics, N. T. Exegesis, Church History, Hermeneutics.
4	S	{ Degree Examinations—English Literature (Ord. and Hon.), French (Hon.), Latin (Ord.), Classics (Hon.), Natural Philosophy (Hon.), Veterinary Hygiene, Metallurgy.
5	S	
6	M	{ Last day for returning Books to the Library. Degree Examinations—Latin (Ord. and Hon.), English Literature (Hon.), Nat. Phil. (Hon.).
7	Tu	{ Degree Examinations—German (Ord. and Hon.), English Literature (Hon.).
8	W	Degree Examinations—French (Ord. and Hon.).
9	Th	{ Degree Examinations—Greek (Ord. and Hon.). Meeting of University Court. Meeting of Classical and Modern Languages Committees of Joint Board.
10	F	{ Degree Examinations—Hebrew (Arts), Celtic. Meeting of Joint Board.
11	S	Meeting of Joint Board.
12	S	
13	M	
14	Tu	
15	W	
16	Th	
17	F	{ Library re-opened. Names of Candidates for Diploma in Education to be given in to Assistant-Clerk (Matriculation Office).
18	S	
19	S	
20	M	

## APRIL 1908.

21	Tu	Graduation. Distribution of University Prizes.
22	W	{ Meeting of Senate. Election of Clerk of Senate and Assistant Clerks. { Summer Session begins.
23	Th	
24	F	
25	S	
26	S	
27	M	
28	Tu	
29	W	
30	Th	

## MAY 1908.

1	F	{ Examination for Diploma in Education. { Close of Matriculation and Enrolment in Classes.
2	S	
3	S	
4	M	
5	Tu	
6	W	
7	Th	Meeting of University Court.
8	F	
9	S	
10	S	
11	M	
12	Tu	
13	W	
14	Th	
15	F	
16	S	
17	S	
18	M	
19	Tu	
20	W	
21	Th	
22	F	
23	S	{ Last day for Professors sending in names of Assistants for 1908-9 to { Secretary of University Court.
24	S	
25	M	Holiday—Monday after Pentecost Friday of May.
26	Tu	
27	W	
28	Th	{ Names of Candidates for Final Professional Examination in Medicine { to be given in to Assistant-Clerk (Matriculation Office). { Last day for Professors and Lecturers sending in to Secretary of University Court estimates of the expenses of their Departments for { next year.
29	F	
30	S	
31	S	

## JUNE 1908.

1	M	Theses for M.D. given in. <sup>1</sup> Names of Candidates for Examination for
2	Tu	M.D. to be given in.
3	W	
4	Th	
5	F	
6	S	
7	S	
8	M	
9	Tu	
10	W	
11	Th	Meeting of University Court. Appointment of Lecturers, and of
12	F	University Assistants.
13	S	
14	S	
15	M	
16	Tu	
17	W	
18	Th	Degree Examination—Practice of Medicine, Surgery.
19	F	Do. Midwifery; Clinical Examinations begin.
20	S	
21	S	
22	M	
23	Tu	
24	W	
25	Th	
26	F	
27	S	
28	S	
29	M	
30	Tu	

## JULY 1908.

1	W	
2	Th	
3	F	Close of Summer Session.
4	S	
5	S	
6	M	
7	Tu	
8	W	
9	Th	Meeting of University Court.
10	F	
11	S	
12	S	
13	M	
14	Tu	
15	W	
16	Th	
17	F	
18	S	
19	S	
20	M	
21	Tu	Meeting of Senate. Graduation in Medicine.
22	W	
23	Th	
24	F	
25	S	
26	S	
27	M	
28	Tu	
29	W	
30	Th	
31	F	

<sup>1</sup> This is the last date in the year 1908 at which Theses for M.D. can be lodged.



## UNIVERSITY OFFICERS.

	Elected.	Electors.
<i>Chancellor</i> —THE RIGHT HON. LORD KELVIN, G.C.V.O., LL.D., - - - - -	1904	General Council.
<i>Vice-Chancellor</i> —DONALD MACALISTER, M.A., M.D., D.C.L., LL.D., - - - - -	1907	Chancellor.
<i>Rector</i> —THE RIGHT HONOURABLE HERBERT H. ASQUITH, M.P., - - - - -	1905	{ Matriculated Students.
<i>Principal</i> —DONALD MACALISTER, M.A., M.D., D.C.L., LL.D., - - - - -	1907	Crown.
<i>Dean of Faculties</i> —SIR JAMES KING, BART., LL.D., - - - - -	1904	Senate.
<i>Parliamentary Representative</i> —SIR HENRY CRAIK, K.C.B., LL.D., - - - - -	1906	General Council.

## University Court.

THE RECTOR, <i>ex officio</i> .		THE PRINCIPAL, <i>ex officio</i> .
THE LORD PROVOST OF GLASGOW, <i>ex officio</i> .		

	Elected.	Electors.
H. E. GORDON, B.A. - - - - -	1904	Chancellor.
WILLIAM LORIMER, - - - - -	1905	Rector.
ALEXANDER MURRAY, C.A., - - - - -	1906	{ Lord Provost, Magistrates, and Town Council of Glasgow.
D. C. M'VAIL, M.B., - - - - -	1891	
SIR WILLIAM ROBERTSON COPLAND, - - - - -	1900	{ General Council.
DAVID MURRAY, LL.D., - - - - -	1903	
JOHN HUTCHISON, LL.D., - - - - -	1905	
PROFESSOR STEWART, D.D., - - - - -	1889	{ Senate.
PROFESSOR MUIR, M.A., M.D., - - - - -	1903	
PROFESSOR JONES, LL.D., - - - - -	1904	
PROFESSOR GRAY, LL.D., - - - - -	1904	

Senatus Academicus.<sup>1</sup>

PRESIDENT, - - - - -	THE PRINCIPAL, - - - - -	1907
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## PROFESSORS.

	CHAIRS.	Appointed
Henry Martyn Beckwith Reid, D.D.,	<i>Divinity</i> , - - - - -	1903
William Stewart, D.D., - - - - -	<i>Biblical Criticism</i> , - - - - -	1873
Sir Thomas M'Call Anderson, M.D., - - - - -	<i>Practice of Medicine</i> , - - - - -	1900 <sup>2</sup>

<sup>1</sup> See note at foot of next page.<sup>2</sup> Professor Anderson occupied the Chair of Clinical Medicine from 1874 till he was appointed to the Chair of Practice of Medicine in 1900.

PROFESSORS— <i>Continued.</i>		CHAIRS.	Appointed
John Ferguson, M.A., LL.D., F.S.A.,	-	<i>Chemistry,</i> -	1874
James Robertson, D.D., LL.D., <sup>1</sup>	- {	<i>Hebrew and Semitic Languages,</i> -	1877
John Cleland, M.D., LL.D., D.Sc., F.R.S.,	-	<i>Anatomy,</i> -	1877
William Jack, LL.D., D.Sc.,	-	<i>Mathematics,</i> -	1879
Frederick O. Bower, Sc.D., F.R.S.,	-	<i>Botany,</i> -	1885
Archibald Barr, D.Sc.,	-	- { <i>Civil Engineering and Mechanics,</i> }	1889
James Moir, LL.D.,	-	- <i>Conveyancing,</i> -	1889
John Harvard Biles, LL.D.,	-	- { <i>Naval Architecture, including Marine Engineering,</i> }	1891
Sir William Macewen, D.Sc. (Oxon.), LL.D., F.R.S.,	-	- { <i>Surgery,</i> -	1892
Ludwig Becker, Ph.D.,	-	- <i>Astronomy,</i> -	1893
Murdoch Cameron, M.D.,	-	- <i>Midwifery,</i> -	1894
Henry Jones, LL.D., Litt.D., F.B.A.,	-	- <i>Moral Philosophy,</i> -	1894
William Smart, D.Phil., LL.D.,	-	- <i>Political Economy,</i> -	1896
Ralph Stockman, M.D.,	-	- <i>Materia Medica,</i> -	1897
John Glaister, M.D.,	-	- <i>Forensic Medicine,</i> -	1898
James Cooper, D.D.,	-	- <i>Church History,</i> -	1898
Robert Muir, M.A., M.D.,	-	- <i>Pathology,</i> -	1899
John S. Phillimore, M.A.,	-	- <i>Humanity,</i> -	1906 <sup>2</sup>
Andrew Gray, LL.D., F.R.S.,	-	- <i>Natural Philosophy,</i>	1899
Dudley J. Medley, M.A.,	-	- <i>History,</i> -	1899
Sir Hector C. Cameron, M.D.,	-	- <i>Clinical Surgery,</i> -	1900
Samson Gemmell, M.D.,	-	- <i>Clinical Medicine,</i> -	1900
Robert Latta, M.A., D.Phil.,	-	- <i>Logic and Rhetoric,</i> -	1902
John Graham Kerr, M.A.,	-	- <i>Zoology,</i> -	1902
William Macneile Dixon, Litt.D.,	-	- { <i>English Language and Literature,</i> }	1904
John Walter Gregory, D.Sc., F.R.S.,	-	- <i>Geology,</i> -	1904
William Murray Gloag, B.A.,	-	- <i>Law,</i> -	1905
Diarmid Noel Paton, M.D.,	-	- <i>Physiology,</i> -	1906
Gilbert Austin Davies, M.A.,	-	- <i>Greek,</i> -	1906

*Note.*—"The precedence of the Masters in point of ceremony shall, in all time coming, be, that the Professor of Divinity take place first after the Principal, and that all the other Masters and Professors of whatever kind take place of other according to the seniority and time of their admissions into their respective offices."—*Statute of Royal Visitation, 1727.*

<sup>1</sup> Professor Robertson will retire before the beginning of session 1907-8.

<sup>2</sup> Professor Phillimore occupied the Chair of Greek from 1899 till he was appointed to the Chair of Humanity in 1906.

## Deans of the several Faculties.

<i>Arts</i> , - - - - -	Professor Phillimore.
<i>Science</i> , - - - - -	Professor Graham Kerr.
<i>Medicine</i> , - - - - -	Professor Stockman.
<i>Law</i> , - - - - -	Professor Gloag.
<i>Theology</i> , - - - - -	Professor Stewart.

## Lecturers.

A. C. Bradley, LL.D., - - -	{ <i>Natural Theology</i> (Gifford Foundation), 1906-8.
Ernest F. Scott, M.A., - - -	{ <i>Apologetics</i> (Alex. Robertson Foundation), 1906-7.
A. H. Charteris, LL.B., - - -	{ <i>Public International Law</i> .
James A. McCallum, LL.B., - - -	{ <i>International Private Law</i> .
Wm. S. McKechnie, LL.B., D.Phil., - - -	{ <i>General Jurisprudence</i> .
James M. Irvine, LL.B., - - -	{ <i>Constitutional Law and History</i> .
William Shaw, - - - - -	{ <i>Civil Law</i> .
Robert Lamond, LL.B., - - -	{ <i>Mercantile Law</i> .
Thomas Barr, M.D., - - -	{ <i>Evidence and Procedure</i> .
J. Walker Downie, M.B., - - -	{ <i>Diseases of the Ear</i> .
Landel R. Oswald, M.B., C.M., - - -	{ <i>Diseases of the Throat and Nose</i> .
James F. Gemmill, M.A., M.D., - - -	{ <i>Insanity</i> .
John H. Teacher, M.A., M.D., - - -	{ <i>Embryology</i> .
* Thomas H. Bryce, M.A., M.D., - - -	{ <i>Pathological Histology</i> .
* William MacLennan, M.B., C.M., - - -	{ <i>Anatomy</i> .
* Charles Workman, M.D., - - -	{ <i>Materia Medica</i> .
* J. H. Pringle, F.R.C.S., - - -	{ <i>Pathology</i> .
* Walter K. Hunter, D.Sc., M.D., - - -	{ <i>Surgery</i> .
* A. M. Ramsay, M.D., - - -	{ <i>Practice of Medicine</i> .
* David McCrorie, L.R.C.P.S., - - -	{ <i>Diseases of the Eye</i> .
* Herbert W. Bolam, B.Sc., Ph.D., - - -	{ <i>Bacteriology</i> .
Frederick Soddy, M.A., - - -	{ <i>Chemistry</i> .
Edward P. Cathcart, M.D., - - -	{ <i>Physical Chemistry</i> .
Charles Latham, - - - - -	{ <i>Physiological Chemistry</i> (Grieve Foundation).
William Boyd, M.A., B.Sc., - - -	{ <i>Mining</i> (Dixon Foundation).
Charles Martin, M.A. (Paris), O.A., - - -	{ <i>Education</i> .
George P. Thistlethwaite, B.A., Ph.D., - - -	{ <i>French Language and Literature</i> .
Fernando Agnoletti, D.Litt., - - -	{ <i>German Language and Literature</i> .
George Henderson, Ph.D., - - -	{ <i>Italian Language and Literature</i> .
Ritchie Girvan, M.A., - - -	{ <i>Celtic Language and Literature</i> .
	{ <i>Early and Middle English</i> .
	<i>Archaeology</i> .

## Lecturers for 1907-8.

William K. Hutton, M.A., M.B., C.M.,	-	-	<i>Regional Anatomy.</i>
Robert Kennedy, M.D.,	-	-	<i>Applied Anatomy.</i>
W. H. Lang, D.Sc., M.B., C.M.,	-	-	<i>Botany.</i>
D. T. Gwynne Vaughan, M.A.,	-	-	<i>Botany.</i>
G. W. Walker, M.A.,	-	-	<i>Physics.</i>
T. S. Patterson, Ph.D., B.Sc.,	-	-	<i>Organic Chemistry.</i>
C. E. Fawsitt, D.Sc., Ph.D.,	-	-	<i>Metallurgical Chemistry.</i>
John S. Nicholson, B.Sc.,	-	-	<i>Electrical Engineering.</i>
Henry Bamford, M.Sc.,	-	-	{ <i>Engineering Drawing and</i> <i>Design.</i>
James G. Gray, B.Sc.,	-	-	<i>Electricity, Pure and Applied.</i>
David K. Picken, M.A.,	-	-	{ <i>Mathematics.</i>
Robert J. T. Bell, M.A., B.Sc.,	-	-	
Robert G. Nisbet, M.A.,	-	-	{ <i>Humanity.</i>
Daniel Rankin, B.A.,	-	-	
William Rennie, M.A.,	-	-	
* John S. Smart, M.A.,	-	-	{ <i>Greek.</i> <i>English Language and</i> <i>Literature.</i>
Ritchie Girvan, M.A.,	-	-	<i>Early and Middle English.</i>
Kenneth K. M. Leys, B.A.,	-	-	<i>British History.</i>
Robert A. Duff, M.A., D.Phil.,	-	-	<i>Political Philosophy.</i>
* Archibald A. Bowman, M.A.,	-	-	<i>Logic.</i>
* John W. Scott, M.A.,	-	-	<i>Moral Philosophy.</i>

## Boards of Studies.—1907.

**In Arts.** *Language and Literature.*—The Principal, the Dean of the Faculty of Arts, Professors Robertson, Dixon, and Davies, Messrs. Martin, Thistlethwaite, Nisbet, Rankin, Rennie, Weir, Agnoletti, Henderson, Morison, and Girvan.—Professor Phillimore, *Concener.*

*Mental Philosophy.*—The Principal, the Dean of the Faculty of Arts, Professors Jones, Smart, and Latta, Dr. R. A. Duff, and Messrs. McCallum, Clark, Scott, and Bowman. Professor Jones, *Concener.*

*Science.*—The Principal, the Dean of the Faculty of Arts, Professors Ferguson, Jack, Bower, Becker, Gray, Kerr, and Gregory, Drs. Bohm, Lang, Patterson, Fawsitt, and Messrs. Walker, Gray, Soddy, Gwynne-Vaughan, Bell, and Picken.—Professor Jack, *Concener.*

\* Lecturers at Queen Margaret College.

*History and Law.*—The Principal, the Dean of the Faculty of Arts, Professors Medley and Dixon, Dr. M'Kechnie, and Messrs. Irvine and Leys.—Professor Medley, *Convener*.

*English (Language, Literature, and British History).*—The Principal, the Dean of the Faculty of Arts, Professors Medley, Dixon, and Davies, Dr. M'Kechnie, and Messrs. Morison, Leys, and Girvan.—Professor Dixon, *Convener*.

*Economic Science.*—The Principal, the Dean of the Faculty of Arts, Professors Jones, Smart, and Medley, Drs. M'Kechnie and Duff, and Messrs. Irvine, M'Callum, and Leys.—Professor Smart, *Convener*.

*In Science.*—Professors Ferguson, Cleland, Jack, Bower, Barr, Biles, Becker, Glaister, Gray, Kerr, Gregory, and Paton, Drs. Fawsitt, Lang, Bolam, Bryce, Patterson, Cathcart, and Kennedy, and Messrs. G. W. Walker, J. G. Gray, Bamford, Nicholson, Latham, Soddy, Gwynne-Vaughan, Bell, and Picken.—Professor Graham Kerr, *Convener*.

*In Medicine.*—Professors Sir Thomas M. Anderson, Ferguson, Cleland, Bower, Sir William Macewen, Murdoch Cameron, Stockman, Glaister, Muir, Gray, Sir Hector C. Cameron, Gemmell, Kerr, and Paton, Mr. G. W. Walker, Drs. Thomas Barr, Downie, Oswald, Hutton, Workman, A. M. Ramsay, Bryce, Pringle, MacLennan, J. F. Gemmill, Bolam, Lang, Hunter, Cathcart, Patterson, and Kennedy, and Mr. Gwynne-Vaughan.—the Dean of the Faculty of Medicine, *Convener*.

### University Assistants or Demonstrators.

<i>Humanity,</i>	-	-	-	{ Robert G. Nisbet, M.A.
				{ Daniel Rankin, B.A.
<i>Greek,</i>	-	-	-	- William Rennie, M.A.
<i>English Language and Literature,</i>	-	-	-	{ John S. Smart, M.A.
				{ Robert Dewar, M.A.
<i>French,</i>	-	-	-	- Léon Pitoy, L. ès L.Phil.
<i>German,</i>	-	-	-	- F. Broecker.
<i>Logic,</i>	-	-	-	- Archibald A. Bowman, M.A.
<i>Moral Philosophy,</i>	-			{ Robert A. Duff, M.A., D.Phil.
				{ John W. Scott, M.A.
<i>Political Economy,</i>	-			{ Thomas Jones, M.A.
				{ Richard H. Tawney, B.A.
				{ David K. Picken, M.A.
<i>Mathematics,-</i>	-	-	-	{ Robert J. T. Bell, M.A., B.Sc.
				{ Neil M'Arthur, M.A., B.Sc.
				{ G. W. Walker, M.A.
				{ James G. Gray, B.Sc.
<i>Natural Philosophy,</i>	-	-	-	{ Robert A. Houston, M.A., B.Sc.
				{ Ph.D.
				{ George E. Allan, D.Sc.

Arnott and Thomson Demonstrator in <i>Experimental Physics</i> , - - - -	}	James G. Gray, B.Sc.
<i>History</i> , - - - -		Kenneth K. M. Leys, B.A.
<i>Civil Engineering and Mechanics</i> , - - - -	}	Harry Bamford, M.Sc.
		John S. Nicholson, B.Sc.
	}	Thos. B. Morley, B.Sc.
		William S. Owen, B.Sc.
<i>Naval Architecture</i> , - - - -	}	G. W. Tyrrell.
<i>Geology</i> , - - - -		D. T. Gwynne-Vaughan, M.A.
<i>Botany</i> , - - - -	}	W. E. Agar, B.A.
<i>Zoology</i> , - - - -		R. A. Staig.
—		
Baxter Demonstrator in <i>Geology</i> , - - - -	}	William R. Wiseman, M.A., B.Sc.
		T. S. Patterson, Ph.D., B.Sc.
<i>Chemistry</i> , - - - -	}	Charles E. Fawsitt, D.Sc., Ph.D.
		James Roberts, F.C.S.
	}	William K. Hutton, M.A., M.B., C.M.
		Archibald N. McLellan, M.B., C.M.
<i>Anatomy</i> , - - - -	}	George M. Gray, M.B., Ch.B.
		A. Blair Aitken, M.B., Ch.B.
	}	R. Bruce Young, M.A., M.B., C.M.
		Hugh H. Fulton, M.B., Ch.B.
<i>Physiology</i> , - - - -	}	(Muirhead Demonstrator).
		Geo. H. Clark, M.B., Ch.B., D.P.H.
<i>Materia Medica</i> , - - - -	}	Francis J. Charteris, M.B., Ch.B.
		John H. Teacher, M.A., M.D.
<i>Pathology</i> , - - - -	}	Carl H. Browning, M.B., Ch.B.
		Leonard Findlay, M.D., Ch.B.
<i>Forensic Medicine</i> , - - - -	}	George A. Brown, M.B., C.M.,
		D.P.H., B.Sc.
<i>Surgery</i> , - - - -	}	J. A. C. Macewen, B.Sc., M.B., C.M.
<i>Clinical Surgery</i> (Sir William Macewen), - - - -		J. A. C. Macewen, B.Sc., M.B., C.M.
	}	Spencer Mort, M.B., Ch.B.
<i>Clinical Surgery</i> (Sir H. C. Cameron), - - - -		Alfred A. Young, M.A., M.B., C.M.
<i>Practice of Medicine</i> , - - - -	}	William R. Jack, B.Sc., M.D.
		John S. McKendrick, M.D.
<i>Clinical Medicine</i> (Dr. Anderson), - - - -	}	William R. Jack, B.Sc., M.D.
		William MacLennan, M.B., C.M.
<i>Clinical Medicine</i> (Dr. Gemmell), - - - -	}	James C. McClure, M.B., C.M.
		John M. M. Kerr, M.B., C.M.
<i>Midwifery</i> , - - - -	}	Samuel J. Cameron, M.B., Ch.B.
		J. Stoddart Barr, M.B., Ch.B.
<i>Diseases of the Ear</i> , - - - -	}	William Guy.
<i>Conveyancing</i> , - - - -		

## Examiners for Degrees.

*In Divinity.*—The Professors in the Faculty of Theology, assisted by the Rev. John Maclean, D.D., and the Rev. Henry Bremner, D.D.

*In Law.*—The Professors and Lecturers in the Faculty of Law, assisted by

Hugh R. Buchanan, LL.B.,	-	-	-	-	1905
A. P. Higgins, LL.D.,	-	-	-	-	1905
Douglas A. Bannatyne, LL.B.,	-	-	-	-	1905
R. Bruce Taylor, M.A.,	-	-	-	-	1907

*In Medicine.*—The Professors and Lecturers in the Faculty of Medicine, as specified in Section xxiv. of Ordinance No. 14, and the following Additional Examiners:—

J. B. Farmer, D.Sc.	1904	Sir James Barr, M.D.	1905
Alexander Macphail, M.B.	1904	Alexander Napier, M.D.	1905
John C. M'Vail, M.D.	1904	P. T. B. Beale, F.R.C.S.	1905
William Duncan, M.D.	1904	David N. Knox, M.B.	1905
A. L. Selby, M.A.	1905	Thomas Gray, D.Sc.	1905
Walter E. Dixon, M.D.	1905	W. H. Thompson, M.D.	1907
J. Lorrain Smith, M.D.	1905	W. G. Ridewood, D.Sc.	1907

*In Arts.*—The Professors and Lecturers in the Faculty of Arts, as specified in Section xiv. of Ordinance No. 13, assisted by the following Additional Examiners:—

John Maclean, D.D.,	-	-	-	Hebrew,	-	-	-	1904
William Rollo, M.A.,	-	-	-	Arabic,	-	-	-	1904
J. B. Farmer, D.Sc.,	-	-	-	Botany,	-	-	-	1904
David H. Crawford, M.A.,	-	-	-	Classics,	-	-	-	1905
Peter Pinkerton, M.A.,	-	-	-	Mathematics,	-	-	-	1905
A. L. Selby, M.A.,	-	-	-	Natural Philosophy,	-	-	-	1905
Thomas Gray, D.Sc.,	-	-	-	Chemistry,	-	-	-	1905
Hugh R. Buchanan, LL.B.,	-	-	-	Roman Law,	-	-	-	1905
A. P. Higgins, LL.D.,	-	-	-	{ Philosophy of Law,				
				{ Constitutional Law &				
				{ History,	-	-		1905
John W. Evans, D.Sc.,	-	-	-	Geology,	-	-	-	1906
W. G. Ridewood, D.Sc.,	-	-	-	Zoology,	-	-	-	1907
S. F. H. Mackay, M.A.,	-	-	-	Classics,	-	-	-	1907
W. A. Raleigh, M.A.,	-	-	-	English,	-	-	-	1907
R. Bruce Taylor, M.A.,	-	-	-	Political Economy,	-	-	-	1907
Robert S. Rait, M.A.,	-	-	-	History,	-	-	-	1907
Hugh M'Callum, M.A.,	-	-	-	Education,	-	-	-	1907
W. W. M'Kechnie, M.A.,	-	-	-	French,	-	-	-	1907
W. P. Chalmers, M.A., Ph.D.,	-	-	-	German,	-	-	-	1907

*In Science.*—Professor Ferguson, LL.D., Professor Cleland, M.D., Professor Jack, LL.D., Professor Bower, Sc.D., Professor Barr, D.Sc., Professor Biles, LL.D., Professor Becker, Ph.D., Professor Gray, LL.D., Professor Kerr, M.A., Professor Gregory, D.Sc., Professor Paton, M.D., and additional examiners.

*Preliminary Examiners in Arts, Science, and Medicine.*—Professor Jack, LL.D., †Professor Phillimore, M.A., Professor Medley, M.A., †Professor Dixon, Litt.D., Professor Davies, M.A., W. K. Gillies, M.A., Robert J. T. Bell, M.A., B.Sc., William Rennie, B.A., Daniel Rankin, B.A., Charles Martin, M.A., †W. W. McKecknie, M.A., George P. Thistlethwaite, Ph.D., W. P. Chalmers, M.A., Ph.D., †W. A. Lindsay, M.A., B.Sc., John Maclean, D.D., Easton S. Valentine, M.A., Archd. Revie, Wm. Rollo, M.A., Magnus Maclean, D.Sc.

### Examiners for Diploma in Education.

William Boyd, M.A., and A. R. Andrew, M.A., H.M.I.S.

### Other Officials.

<i>Secretary to the University</i>	{ Alan E. Clapperton, B.L., 91 West Court, - - - - { Regent Street.
<i>Assistant to the Secretary of the University Court,</i> - - - {	Robert Brough.
<i>Clerk of Senate,</i> - - - - {	Professor Stewart, D.D., 18 Annfield Terrace, Partickhill.
<i>Assistants to the Clerk of Senate,</i> - - - - {	W. Innes Addison. Albert Morrison.
	{ Miss Galloway, Secretary at Queen Margaret College.
<i>Registrar of the General Council,</i> - - - - {	W. Innes Addison, Matriculation Office.
<i>Clerk of the General Council,</i> - - - - {	Archibald Craig, LL.B., 149 West George Street.
<i>Librarian and Keeper of Hunterian Books and MSS.</i> {	James L. Galbraith.
<i>Sub-Librarian,</i> - - - - -	Mungo Ferguson, M.A.,
	{ William Weatherston,
<i>Assistant Librarians,</i> - - - - {	William G. Macdonald. Robert M. Burdon.
	{ Irving M. Morgan, M.A.
<i>Honorary Curator of Hunterian Coins,</i> - - - - {	George Macdonald, LL.D.
<i>Under-Keeper of Hunterian Museum,</i> - - - - {	William Kinghorn.
<i>Factors,</i> - - - - -	Hill & Hoggan, 194 Ingram Street.
<i>Law-Agents,</i> - - - - -	{ Mitchells, Johnston & Co., 160 West George Street.

† Members of the Joint Board.



<i>Auditors,</i>	-	-	-	{	Brown, Fleming & Murray. 163 West George Street.
<i>Publishers and Booksellers to</i>				{	James MacLehose & Sons, 61 St.
<i>the University,</i>	-	-	-	{	Vincent Street.
<i>Printers to the University,</i>	-	-	-	{	Robert MacLehose & Co. Ltd., Anniesland.
<i>Organist,</i>	-	-	-	-	A. M. Henderson, L.R.A.M.
<i>Robe Makers to the Univer-</i>				{	James Thomson & Son, 191 West
<i>sity,</i>	-	-	-	{	George Street.
<i>Master of Works,</i>	-	-	-	-	John Stitt.
<i>Bedellus,</i>	-	-	-	-	William Finlayson.

### Representatives of the University Court on Charitable and other Boards.

*General Medical Council*—Professor Sir Thomas M. Anderson, M.D.  
*Western Infirmary*—Sir Matthew Arthur, Bart., and Mr. David Johnston.

*Victoria Infirmary*—Dr. M'Vail and John Hutchison, LL.D.

*Glasgow Eye Infirmary*—Sir William Macewen, D.Sc. (Oxon.), M.D.

*Glasgow Samaritan Hospital for Women*—Henry E. Gordon, B.A.

*West of Scotland Agricultural College*—Dr. M'Vail.

*Highlands and Islands Educational Trust*—H. P. Macmillan,  
 LL.B., Advocate.

*Stirling Educational Trust*—Mr. Charles King.

*West of Scotland Biological Association*—Prof. Graham Kerr, M.A.

*Glasgow Athenæum Commercial College*—Prof. Smart, D.Phil., LL.D.

### Representatives of the Senate on Educational and other Boards.

*Glasgow and West of Scotland Technical College*—Professors Bower and Gray.

*West of Scotland Agricultural College*—Professor Stewart.

*Glasgow City Educational Endowments Board*—Professor Stewart.

*Glasgow General Educational Endowments Board*—Professors Stewart and Medley.

*Glasgow School of Art*—Professor Cleland.

*Hutchesons' Educational Trust*—Professor Ramsay.

*John Clark (Mile-End) Bursary Trust*—Professor Stewart.

*Scott Scholarship and Bursaries Trust*—Professors Ramsay and Dixon.

*Western Infirmary*—Professors Jones and Paton.

*Royal Infirmary*—Professor Glaister.

*Asylum for the Blind*—Professor Murdoch Cameron.

*Glasgow Convalescent Home*—Professor Muir.

*Baillie's Institution*—Professor Ferguson.

*Haldane Trust*—Professor Phillimore.

### Joint Committees of Senate and Court.

**LIBRARY COMMITTEE.**—*Convener*, Professor Latta.  
*Appointed by the Senate*—Professors Glaister, Cooper, Latta, Kerr, Phillimore, and Dixon.  
*Appointed by the University Court*—Dr. David Murray, Sir William R. Copland, and Dr. John Hutchison.

**MUSEUMS COMMITTEE.**—*Convener*, The Principal.  
*Appointed by the Senate*—The Principal and Professors Cleland, Bower, and Kerr.  
*Appointed by the University Court*—Dr. M'Vail and Mr. Henry E. Gordon.

**OBSERVATORY AND LABORATORIES COMMITTEE.**—  
*Convener*, Professor Gray.  
*Appointed by the Senate*—Professors Ferguson, Becker, Gray, and Stockman.  
*Appointed by the University Court*—Sir William R. Copland and Mr. Henry E. Gordon.

**The Carnegie Trust for the Universities of Scotland.**  
*Trustee representing Glasgow University*—Professor Stewart.

### Committee on Civil Service and other External Examinations.

Professors Jack, Bower, Jones, Smart, Phillimore, Gray, Medley, and Latta, and Mr. J. M. Irvine—Professor Medley, *Convener and Secretary*.

### Glasgow Provincial Committee for the Training of Teachers.

*Chairman*—Professor Latta. *Director*—Mr. Donald Macleod.  
 (See page 708.)

### Students' Representative Council.

Nov., 1906—Nov., 1907.

*President*—J. C. Watson.  
*Vice-Presidents*—C. P. Williamson and Joseph Davidson, M.A.  
*Secretary*—Robert E. Lee, M.A., The Union.  
*Treasurer*—John R. Lee.  
*Conveners of Grand Committees*—James H. Cockburn, M.A. (Divinity); R. M. Grant, M.A. (Law); J. Mowat (Medicine); C. C. Mackintosh (Science); D. N. Strathie, M.A. (Arts); Margaret M. Farquharson (Queen Margaret).  
*Conveners of Standing Committees*—*Amusements*, James C. Dick; *Lodgings*, James Keith, M.A., The Union; *Book Exchange*, R. M. Mathams.  
*Editor of Magazine*—A. S. Wallace.

## I.—THE UNIVERSITY.

The University of Glasgow is a corporate body, which has always included a Chancellor, Rector, Dean of Faculties, Principal, Professors, and Students. It was originally founded, like most other ancient establishments of the same nature, by the authority of the See of Rome. Pope Nicholas V., by a bull, dated the seventh of January, 1450-1, erects and establishes in Glasgow a "*Studium Generale . . . tam in theologia ac jure canonico et civili, quam in artibus, et quavis alia licita facultate.*" He then declares that this University shall have the same power of creating Masters and Doctors as any other "*studium generale*" in Christendom, and appoints the Bishop of Glasgow and his successors, Chancellors and Rectors by his authority. In the same year a body of statutes was prepared, and the University established by the exertions of the Bishop and his Chapter. It consisted, at this time, of the Chancellor and Rector, of various Masters and Doctors in the Faculties of Theology, Canon Law, and the Arts; and, lastly, of the incorporated students in these Faculties, who might be promoted to the same degrees in each, after following out the course of study prescribed in the statutes.

The University, at this time, had received no endowments, and was possessed of no property, except a University purse, into which were put some small perquisites on conferring degrees, and the patronage of two or three small chaplainries. It continued, however, to discharge its important functions with great zeal and activity, and attracted a greater number of members than could well have been expected in that rude period of society. The University Records contain little information as to lectures delivered in the Higher Faculties, or the number of the students who attended them. But we learn that within three or four years after the establishment of the University, so many young men were matriculated in the Faculty of Arts, that it was thought expedient to provide a house in which they

might reside, and to secure a regular set of teachers for their instruction.

The house provided for the accommodation of the students in Arts was known by the name of *Pædagogium*, or the College of Arts. It is said to have been situated in the Rottenrow ; but in the year 1460, James, Lord Hamilton, bequeathed to Mr. Duncan Bunch, principal Regent of the College of Arts, and his successors, Regents, for the use of the said College, a tenement in the High Street, with four acres of land adjoining. In buildings situated on this ground the classes of the University continued to meet for upwards of four hundred years.

The Reformation produced at first great disorder in the University, its members being clergymen of the Catholic persuasion, and its chief support being derived from the Church. In 1577, James VI. prescribed very particular rules with regard to the College, and the form of its government, and made a considerable addition to its funds. The charter by which the king made these regulations, and gave that property, is known by the name of *Nova Erectio*.

By this charter, provision was made for the support of a Principal, who was to teach Theology and the Holy Scriptures, and was also Professor of Hebrew and Syriac, and three Regents, of whom one was to teach Greek and Rhetoric, another Dialectics, Morals, and Politics, with the Elements of Arithmetic and Geometry, and the third, who was also Sub-Principal, was to teach all the branches of Physiology and Geography, Chronology and Astrology. The Regents were to keep each by his own Profession, so that the student had a new Regent every year.<sup>1</sup>

From this small beginning, the University continued to prosper till the era of the Restoration, having at that time, besides the Principal, two Professors of Theology, one of Medicine, four Regents or Professors of Philosophy, and one of Humanity, a Librarian, with a tolerable Library, an increased number of Bursars and of other students of all ranks. At the Restoration, however, being deprived of a great part of its revenues in consequence of the re-establishment of Episcopacy, three of the Professorships fell into abeyance, and the College was again reduced to a Principal,

<sup>1</sup>This system was altered in 1642, in accordance with the practice of the other Universities ; but returned to after the Revolution. The four classes necessary to Graduation in Arts were called—the first, *Bajan* ; the second, *Semi* ; the third, *Baccalour* ; the fourth, *Magistrand*.

a Professor of Theology, and four Regents. This state of matters continued till the Revolution, when the University again began to prosper after a long period of depression.<sup>1</sup> In the next thirty years seven Professorships were either originally founded or revived, viz. :—those of Mathematics (1691), Humanity (1706), Oriental Languages (1709), Civil Law (1712), Medicine (1712), Church History (1716), and Anatomy (1718); and to these a Professorship of Astronomy was added in 1760. The following eighteen Professorships were founded during the nineteenth century, viz. :—Natural History (1807), Surgery (1815), Midwifery (1815), Chemistry (1817), Botany (1818), Materia Medica (1831), Institutes of Medicine (1839), Forensic Medicine (1839), Civil Engineering (1840), Conveyancing (1861), English Language and Literature (1861), Divinity and Biblical Criticism (1861), Clinical Surgery (1874), Clinical Medicine (1874), Naval Architecture (1883), History (1893), Pathology (1893), Political Economy (1896). In 1903 the Chair of Geology was founded, and the Chair of Natural History became the Chair of Zoology.

#### UNIVERSITY BUILDINGS.

The changes in the City of Glasgow having so entirely altered the character of the district in which the University Buildings were planted in the fifteenth century as to render the locality altogether unsuitable for an Academic Institution; and the buildings themselves having become, by their limited extent and defective construction, inadequate for the modern requirements of a great educational establishment; measures were adopted for the removal of the University to more extended and commodious buildings, and for this purpose a large extent of ground was secured in the lands of Gilmorehill, in the western part of the City.

In 1846, a Bill for the sale of the College grounds and buildings to the Monklands Junction Railway Company, and the transference of the University to a new site on Woodlands, was passed by both Houses of Parliament, and received the Royal assent. But that measure failed by the inability of the Railway Company to implement their engagements; and the Senate of the University found no favourable opportunity for the renewal of the scheme, till the year 1863, when a proposal

<sup>1</sup> See Dr. Thomas Reid's Account of the University of Glasgow.

for the purchase of the College lands and buildings was made by the City of Glasgow Union Railway Company, and a sale was accordingly effected to that Company, under their Act of Parliament, in 1864, at the price of £100,000.

The funds at the disposal of the University to carry out the scheme of removal consisted of—(1.) The produce of the sale of the old College and grounds, £100,000,—(2.) A sum of £17,500, consisting of the principal sum of £10,000, obtained by the University as compensation from the Monklands Junction Company, for non-fulfilment of their agreement, with interest since the time of payment, and—(3.) A sum of £21,400, promised by her Majesty's Government in aid of the scheme of removal, conditionally on a further sum of £24,000 being raised by public subscription, for the erection of a sick hospital in connection with the new University Buildings.

With these funds at their disposal, buildings might have been erected sufficient for the transaction of the ordinary business of instruction in the same manner as heretofore, and for the accommodation of the Library and Museum, but they must have been of the plainest design, and on a scale quite inadequate to provide for the future extension of the University.

In these circumstances, the Senate resolved to make an earnest appeal for aid to the Government and to the public. This appeal was responded to in the most generous and gratifying manner. In a short time a sum of nearly £100,000 was subscribed, chiefly in the City of Glasgow; and the Government, appreciating the importance of the work, and the public interest it had excited, announced their intention to ask Parliament for the sum of £120,000, in six annual instalments, on condition of a like amount being raised by subscription and expended on the buildings. This sum was paid out of the National Treasury, and there has been received from the public subscription for the University Buildings and the Western Infirmary and from legacies the large amount of £261,429, including £45,000 from the late Marquis of Bute for the erection of the Bute Hall, £5,000 from the late Dr. J. M'Intyre for the University Union Buildings, £5,000 from the Bellahouston Trustees for Medical Buildings in the Women's department, £4,274 from the late Sir William Pearce, Bart., for the removal of the old College front and the re-erection of the materials at

the north-east gateway, £5,000 bequeathed by Mr. Andrew Cunninghame, and £1,000 (less legacy duty) bequeathed by Mr. James Marshall for the completion of the tower, and special subscriptions amounting to £2,600 for building and furnishing the Gymnasium. A sum of £30,000 was allocated to the Western Infirmary. New buildings, designed by the late Sir G. Gilbert Scott, were erected on the grounds of Gilmorehill; and in these buildings the classes of the University met for the first time in session 1870-71. In 1893 the buildings and grounds were extended by the gift of North Park House and Grounds for the use of the women students of the University. Extensive additions to the buildings at Gilmorehill have recently been made, including Engineering Lecture-rooms and Laboratory, Botany Class-rooms, Museum and Herbarium, and an extension of the Anatomical Department. The cost of these additions has been defrayed from the Randolph Bequest and from funds provided by the Bellahouston Trustees, the Trustees of the late James B. Thomson, and other benefactors. Two other groups of buildings were completed in 1907, funds having been provided by the Carnegie Trust and by the late Principal's University Equipment Scheme. The one group is for the accommodation of Natural Philosophy, and the other for Physiology, Materia Medica, and Forensic Medicine. A temporary building has also been erected for increasing the accommodation of the Chemical Department.

#### GOVERNMENT OF THE UNIVERSITY.

Previous to the Universities Act of 1858 the whole business of the University was transacted in three distinct courts—namely, the Senate, the Faculty, and the Comitia.

The *Senate* consisted of the Rector, the Dean, the Principal, and all the Professors of the University. Meetings of the Senate were held for conferring degrees, and for the management of the libraries and other matters belonging to the University.

The *Faculty*, or College Meeting, consisted of the Principal, who presided, and the Professors of Divinity, Church History, Oriental Languages, Natural Philosophy, Moral Philosophy, Mathematics, Logic, Greek, Humanity, Civil Law, Medicine, Anatomy and Practical Astronomy. The Members of Faculty had the administration of the whole revenue and property of the College, along with the right of exercising the patronage of eight pro-

fessorships vested in the College. They also presented a Minister to the parish of Govan, and had the gift of various bursaries.

The Constituent Members of the *Comitia* were the Rector, the Dean, the Principal, the Professors, and the Matriculated Students of the University. The Rector or Vice-Rector presided in this Court, and also in the Senate. Meetings of the *Comitia* were held for the election and admission of the Rector, for hearing the inaugural discourses of the Principals and Professors previously to their admission to their respective offices, and for promulgating the laws of the University.

Besides these a court, called the *Jurisdictio Ordinaria*, consisting of the Principal, the four Regents (viz., the Professors of Greek, Logic, Ethics, and Physics), and the Professor of Humanity, with the gowned students, met occasionally, for the exercise of discipline over the junior students.

By the Scottish Universities Act, 21 and 22 Vict., chap. 83, important changes were made in the constitution and government of the University. The distinction between the Faculty and the Senate was abolished; two new bodies, called the University Court and University Council, were instituted; and Commissioners were appointed, armed with extensive powers of revision and regulation, who issued ordinances, sanctioned by Her Majesty, for the administration of the affairs of the University.

Further changes were made by the Universities (Scotland) Act, 1889. A Committee of Her Majesty's Privy Council was constituted, styled the Scottish Universities Committee of the Privy Council. An Executive Commission was created with power to repeal or modify any ordinance made under the Act of 1858. The Commissioners continued to exercise their powers till the end of 1897 and issued ordinances, *inter alia*, for Degrees in Arts, Science, Medicine, Law, and Divinity, for the instruction and graduation of Women, and for special study and research. They also issued an ordinance (No. 60) laying down regulations for the constitution of the Students' Representative Council, and regulations under which that Council is entitled to petition the *Senatus Academicus* and the University Court.



## CHANCELLOR.

The Chancellor is the head of the University, and, by himself or his deputy, has the privilege of conferring Academical Degrees upon persons found qualified by the Senate. All changes in the internal arrangements of the University must have the sanction of the Chancellor before being carried into effect. He is elected by the General Council, of which he is president. His office is held during life. He nominates an Assessor in the University Court, and he is empowered to appoint a Vice-Chancellor to discharge his office in his absence, so far as regards conferring Degrees, but in no other respect. The office of Vice-Chancellor has usually been, and is now, held by the Principal.

*Chancellors from the year 1642.*

- 1642. James Hamilton, Marquis of Hamilton.
- 1660. William Cunningham, Earl of Glencairn.
- 1661. Andrew Fairfowl, Archbishop of Glasgow.
- 1664. Alexander Burnett,       "       "
- 1670. Robert Leighton,       "       "
- 1674. Alexander Burnett,       "       "
- 1679. Arthur Ross,       "       "
- 1684. Alexander Cairncross,       "       "
- 1687. John Paterson,       "       "
- 1692. John Carmichael, Earl of Hyndford.
- 1714. James Graham, Duke of Montrose.
- 1743. William Graham,       "       "
- 1781. James Graham,       "       "
- 1837. James Graham,       "       "
- 1875. Sir William Stirling-Maxwell, Bart., M.P.
- 1878. Walter Francis, Duke of Buccleuch and Queensberry, K.G.
- 1884. John Hamilton Dalrymple, Earl of Stair, K.T.
- 1904. WILLIAM THOMSON, BARON KELVIN OF LARGS, G.C.V.O., O.M.

## RECTOR.

The Rector is elected by the matriculated students of the University, divided into four nations.<sup>1</sup> In the case of an

<sup>1</sup> The nations are constituted as follows:—

1. The Natio Glottiana consists of all matriculated students born within the County of Lanark.

2. The Natio Transforthana consists of all matriculated students born within any of the Counties of Orkney and Shetland, Caithness, Sutherland, Ross, Inverness, Cromarty, Nairn, Moray, Banff, Aberdeen, Perth, Forfar, Kincardine, Clackmannan, Fife, Kinross, Argyle, Stirling, and Dumbarton.

3. The Natio Rothseiana consists of all matriculated students born within any of the Counties of Bute, Renfrew, and Ayr.

4. The Natio Loudoniana consists of all matriculated students not included in any of the other nations.

equality of nations the Chancellor had, in accordance with the Act of 1858, the casting vote, but under the Act of 1889 the Commissioners have ordained (Ord. No. 7) that the election shall be determined by the majority of votes of all the students voting whenever the votes of the nations shall be equally divided. The Universities Commission (1858) ordained that the election should take place upon the 15th November (the 16th, if the 15th fell on a Sunday); but by Ordinance No. 139 of the Universities Commission (1889), the election is to take place on such day in the month of October or November as may be fixed by the University Court after consultation with the Senate, but the date cannot be later than the second Saturday in November in any year. The term of office is three years. The Rector is the official President of the University Court.

*Rectors from 1773.*

- 1773. Charles Cathcart, Lord Cathcart.
- 1775. Lord Chief Baron Montgomerie.
- 1777. Andrew Stewart, Esq. of Torrance.
- 1779. James Maitland, seventh Earl of Lauderdale.
- 1781. Right Hon. Henry Dundas.
- 1783. Right Hon. Edmund Burke.
- 1785. Robert Graham, Esq. of Gartmore.
- 1787. Adam Smith, LL.D.
- 1789. Walter Campbell, Esq. of Shawfield.
- 1791. Thomas Kennedy, Esq. of Dunure.
- 1793. William Mure, Esq. of Caldwell.
- 1795. William McDowall, Esq. of Garthland.
- 1797. George Oswald, Esq. of Auchincruive.
- 1799. Right Hon. Sir Hay Campbell, Lord President.
- 1801. William Craig, a Lord of Session.
- 1803. Lord Chief Baron Dundas.
- 1805. Henry Glassford, Esq. of Dugalston.
- 1807. Archibald Colquhoun, Esq. of Killermont.
- 1809. Archibald Campbell, Esq. of Blythswood.
- 1811. Lord Archibald Hamilton.
- 1813. Thomas Graham, Lord Lynedoch.
- 1815. David Boyle, Lord Justice Clerk.
- 1817. George Boyle, Earl of Glasgow.
- 1819. Kirkman Finlay, Esq., M.P.
- 1820. Francis Jeffrey, Esq., Advocate.
- 1822. Sir James Mackintosh, M.P.
- 1824. Henry Brougham, Esq., M.P.
- 1826. Thomas Campbell, LL.D.
- 1829. Henry Petty, Marquis of Lansdowne.

- 1831. Henry Cockburn, Esq., Solicitor-General.
- 1834. Lord Stanley, M.P.
- 1836. Sir Robert Peel, Bart., M.P.
- 1838. Sir J. G. R. Graham, Bart., M.P.
- 1840. John Campbell, Marquis of Breadalbane.
- 1842. Right Hon. Fox Maule, M.P.
- 1844. Andrew Rutherford, Esq.
- 1846. Lord John Russell.
- 1847. Colonel Mure of Caldwell.
- 1848. Thomas Babington Macaulay, Esq.
- 1850. Archibald Alison, Esq., Sheriff of Lanarkshire.
- 1852. Earl of Eglinton.
- 1854. Duke of Argyle.
- 1856. Sir Edward Bulwer Lytton.
- 1859. Earl of Elgin.
- 1862. Viscount Palmerston.
- 1865. John Inglis, Lord Justice Clerk.
- 1868. Lord Stanley (afterwards Earl of Derby).
- 1871. Right Hon. Benjamin Disraeli, M.P. (Earl of Beaconsfield).
- 1877. Right Hon. William Ewart Gladstone, M.P.
- 1880. Right Hon. John Bright, M.P.
- 1883. Right Hon. Henry Fawcett, M.P.
- 1884. Edmund Law Lushington, LL.D., D.C.L.
- 1887. Right Hon. Earl of Lytton, G.C.B., G.C.S.I., C.I.E.
- 1890. Right Hon. Arthur James Balfour, M.P.
- 1893. Right Hon. Sir John Eldon Gorst, M.P.
- 1896. Right Hon. Joseph Chamberlain, M.P.
- 1899. Right Hon. Earl of Rosebery, K.G., D.C.L., LL.D.
- 1902. Right Hon. George Wyndham, M.P.
- 1905. RIGHT HON. HERBERT H. ASQUITH, M.P.

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#### DEAN OF FACULTIES.

From the beginning there has been in the University an officer of dignity with the title of Dean of Faculty or Dean of Faculties. The duties of the office, as originally constituted, were to exercise a superintendence over the studies, and, in conjunction with the Masters, to judge of the qualifications of applicants for degrees. From the year 1772 it was the duty of the Dean, in concert with the Rector and the Minister of Glasgow, to examine the accounts of the administration of the Revenue, and to give advice to the Principal and Professors, when it was necessary for them to institute a judicial inquiry

into the conduct of any of their number. By the Universities Act of 1858 the Dean of Faculties was a member of the University Court, but in the enumeration of the constituent members of the new University Court in the Act of 1889 the name does not occur. The election is made annually by the Senate at the close of the winter session.

*Deans from the year 1800.*

1800. James Couper, D.D.	1843. Sir T. M'cdougall Brisbane, Bart.
1802. Archd. Campbell, Esq. of Succoth.	1845. A. Macdonald, Lord Meadowbank.
1804. Gavin Gibb, D.D.	1847. Earl of Eglinton.
1806. Duncan Macfarlan, D.D.	1849. Colonel Mure of Caldwell, M.P.
1808. Gavin Gibb, D.D.	1851. W. Lockhart, Esq., M.P.
1810. Duncan Macfarlan, D.D.	1853. Colonel Mure.
1812. Gavin Gibb, D.D.	1854. W. Lockhart, Esq.
1814. Stevenson Macgill, D.D.	1857. W. Stirling, Esq., of Keir, M.P.
1815. Archibald Campbell, Esq., M.P.	1860. J. Moncreiff, Lord Advocate.
1817. Sir John Connell.	1863. Sir A. I. Campbell of Succoth.
1819. Archibald Campbell, Esq., M.P.	1865. Henry Glassford Bell, Esq.
1821. Sir John Connell.	1868. Sir James Fergusson, Bart.
1823. Archibald Campbell, Esq., M.P.	1869. Sir Thos. E. Colebrooke, Bart., M.P.
1825. Sir John Connell.	1872. Archd. Orr Ewing, Esq., M.P.
1827. Archibald Campbell, Esq., M.P.	1876. Alexander B. McGrigor, LL.D.
1829. Sir John Connell.	1879. James King, Esq.
1831. Archibald Campbell, Esq.	1882. R. W. Cochran-Patrick, LL.D., M.P.
1833. Sir A. Campbell, Bart.	1885. Alexander Crum, Esq., M.P.
1835. Archibald Campbell, Esq.	1888. Robert Berry, LL.D.
1837. Sir A. Campbell, Bart.	1896. W. P. Dickson, D.D., LL.D.
1839. Kirkman Finlay, Esq.	1901. The Rt. Hon. Lord Kelvin, G.C.V.O.
1841. Lord Dunfermline.	1904. Sir JAMES KING, BART., LL.D.

PRINCIPAL.

The office of Principal or Principal Regent of the College was almost coeval with the foundation of the University, and was regulated anew by James VI., in 1577. It is in the appointment of the Crown. The Principal is President of the Senatus Academicus; and is also, *ex officio*, a member of the University Court.

*Principals from the year 1574.*

1574. Andrew Melville.	1701. John Stirling.
1580. Thomas Smeaton.	1728. Neil Campbell.
1586. Patrick Sharpe.	1761. Wm. Leechman, D.D.
1615. Robert Boyd.	1786. Archd. Davidson, D.D.
1622. John Cameron, D.D.	1803. William Taylor, D.D.
1626. John Strang, D.D.	1823. Duncan M'Farlan, D.D.
1650. Robert Ramsay.	1858. Thomas Barclay, D.D.
1653. Patrick Gillespie.	1873. John Caird, D.D.
1661. Robert Baillic, D.D.	1898. Robert Herbert Story, D.D., LL.D.
1662. Edward Wright.	1907. DONALD MACALISTER, M.A., M.D., D.C.L., LL.D.
1684. James Fall.	
1690. William Dunlop.	

## UNIVERSITY COURT.

The University Court consists of (a) the Rector, (b) the Principal, (c) the Lord Provost of Glasgow for the time being, (d) an Assessor nominated by the Chancellor, (e) an Assessor nominated by the Rector, (f) an Assessor nominated by the Lord Provost, Magistrates, and Town Council of Glasgow, (g) four Assessors elected by the General Council, (h) four Assessors elected by the Senatus Academicus. There is a further provision in the Act of 1889 for the representation of affiliated Colleges.

*Assessors since the University Court was constituted.*

## CHANCELLOR.

- 1859. John Robertson, D.D., Glasgow.
- 1865. A. Sym, D.D., New Kilpatrick.
- 1870. James Pearson, D.D., Strathblane.
- 1874. Robert Jamieson, D.D., Glasgow.
- 1878. J. A. Campbell, LL.D., Stracathro.
- 1887. Sir James King, Bart., LL.D.
- 1904. HENRY E. GORDON, B.A., OF AIKENHEAD.

## RECTOR.

- 1860. Thomas Buchanan, Esq.
- 1863. Walter Buchanan, Esq., M.P.
- 1866. Archibald Orr Ewing, Esq.
- 1869. James A. Campbell, LL.D.
- 1878. Alexander Crum, Esq.
- 1880. Charles Cameron, M.D., LL.D., M.P.
- 1884. A. B. McGrigor, LL.D.
- 1887. James Grahame, Esq.
- 1890. Lord Blythswood, LL.D.
- 1893. Matthew P. Fraser, LL.B.
- 1896. David Murray, LL.D.
- 1899. Alexander Ure, LL.B., M.P., Q.C.
- 1902. Allan F. Baird, Esq.
- 1905. WILLIAM LORIMER, Esq.

## LORD PROVOST, MAGISTRATES, AND TOWN COUNCIL OF GLASGOW.

- 1889. James Colquhoun, LL.D.
- 1899. Robert M. Mitchell, Esq.
- 1906. ALEXANDER MURRAY, Esq.

## GENERAL COUNCIL.

- 1859. Andrew Bannatyne, LL.D.
- 1864. Lord Kinloch.
- 1867. Anderson Kirkwood, LL.D.

1887. R. W. Cochran-Patrick, LL.D.  
 1889. David Hannay, Esq.  
 1889. Hector C. Cameron, M.D.  
 1889. Sir John Neilson Cuthbertson.  
 1891. Rev. J. W. King, M.A., D.D.  
 1891. D. C. McVail, M.B.  
 1893. Hector C. Cameron, M.D.  
 1893. Sir John Neilson Cuthbertson.  
 1895. Rev. J. W. King, D.D.  
 1895. D. C. McVail, M.B.  
 1897. Hector C. Cameron, M.D.  
 1897. Sir John Neilson Cuthbertson, LL.D.  
 1899. D. C. McVail, M.B.  
 1899. Sir James Bell, Bart.  
 1900. William Robertson Copland, C.E.  
 1901. Sir John Neilson Cuthbertson, LL.D.  
 1901. William Robertson Copland, C.E.  
 1903. D. C. McVAIL, M.B.  
 1903. DAVID MURRAY, LL.D.  
 1905. John Hutchison, LL.D.  
 1905. SIR WILLIAM ROBERTSON COPLAND, C.E.  
 1905. JOHN HUTCHISON, LL.D.

## SENATUS ACADEMICUS.

- 15th Nov., 1859. Professor W. Ramsay, M.A.  
 11th Dec., 1863. Professor R. Buchanan, LL.D.  
 12th Dec., 1867. Professor Allen Thomson, M.D.  
 11th Jan., 1872. Professor Sir W. Thomson.  
 13th Jan., 1876. Professor Cowan, M.D.  
 29th Jan., 1880. Professor Berry, M.A., LL.D.  
 31st Jan., 1884. Professor Dickson, D.D., LL.D.  
 9th Feb., 1888. Professor G. G. Ramsay, LL.D.  
 28th Nov., 1889. Professor Leishman, M.D.  
 28th Nov., 1889. Sheriff Berry, LL.D.  
 28th Nov., 1889. Professor Stewart, D.D.  
 28th Nov., 1890. Professor Ramsay, LL.D.  
 30th Nov., 1891. Professor Leishman, M.D.  
 28th Nov., 1892. Sheriff Berry, LL.D.  
 28th Nov., 1893. Professor Stewart, D.D.  
 30th Nov., 1893. Professor Gairdner, M.D., LL.D.  
 28th Nov., 1894. Professor Jack, LL.D.  
 30th Nov., 1895. Sir W. T. Gairdner, K.C.B., M.D., LL.D.  
 28th Nov., 1896. Sheriff Berry, LL.D.  
 28th Nov., 1897. Professor Stewart, D.D.  
 28th Nov., 1898. Professor Adamson, LL.D.  
 30th Nov., 1899. Professor Young, M.D.

28th Nov., 1900.	Professor Moir, LL.D.
28th Nov., 1901.	Professor Stewart, D.D.
6th Mar., 1902.	Professor Raleigh, M.A.
28th Nov., 1902.	Professor Raleigh, M.A.
15th Jan., 1903.	Professor Muir, M.A., M.D.
30th Nov., 1903.	PROFESSOR MUIR, M.A., M.D.
13th Oct., 1904.	Professor Jones, LL.D., Litt.D., F.B.A.
28th Nov., 1904.	PROFESSOR GRAY, LL.D.
28th Nov., 1905.	PROFESSOR STEWART, D.D.
28th Nov., 1906.	PROFESSOR JONES, LL.D., Litt.D., F.B.A.

The Rector's Assessor continues in office three years, and the other Assessors four years.

Under the Universities Act, 1858, the Court has power :

1. To review all decisions of the Senate, and to be a Court of Appeal from the Senatus, except as otherwise provided in the Universities Act.

2. To effect improvements in the internal arrangements of the University, after due communication with the Senate, and with the sanction of the Chancellor: provided that all such proposed improvements be submitted to the General Council for consideration.

3. To require due attention on the part of the Professors to the Regulations as to the mode of teaching and other duties imposed on the Professors.

4. To fix and regulate, from time to time, the fees in the several Classes.

5. Upon sufficient cause shown, and after due investigation, to censure any member of Senate, or to suspend him from office, and from the emoluments thereof, in whole or in part, for any period not exceeding one year, or to require him to retire on a retiring allowance, or to deprive him of office; and during the suspension of any Professor, to make provision for the teaching of his class: provided always, that no such sentence of censure, deprivation, etc. shall have effect until approved by His Majesty in Council.

By Section 19 any of the Rules and Ordinances enacted by the Universities Commissioners under the Act, may be altered or revoked by the University Court of the University to which they are applicable, but only with the written consent of the Chancellor, and with the approval of His Majesty in Council.

By the Universities (Scotland) Act, 1889, the University Court is a body corporate with perpetual succession and a common seal; and all the property belonging to the University at the passing of the Act is now vested in that body.

By the same Act, the University Court, in addition to the powers conferred upon it by the Act of 1858, has power :

1. To administer the whole revenue and property of the University, including share of annual Government Grant, and bursary and other mortifications.

2. To review any decision of the Senate, appealed against by a member of Senate or other member of the University interested,<sup>1</sup> and to receive representations and reports from the Senate and the General Council.

3. To review on representation by any member of the University Court or by any member of Senate, any decision of the Senate in the exercise of its

<sup>1</sup> An appeal against any decision of the Senate must be lodged with the Secretary of the University Court within fourteen days from the date of the issue of such decision. See Ordinance No. 5.

powers of regulating and superintending the teaching and discipline of the University; but decisions in matters of discipline can be reviewed only on appeal by a member of Senate or by a member of the University directly affected.

4. To appoint professors to chairs in University patronage; to appoint examiners and lecturers; and to recognise for graduation purposes the teaching of any college or individual teacher, under any regulations laid down by the Commissioners, which regulations, after the expiration of the powers of the Commissioners, may from time to time be modified or altered by the Universities Committee.

5. To define on application by any member of the Senate the nature and limits of a professor's duties under his commission, subject to appeal to the Universities Committee.<sup>1</sup>

6. To take proceedings against a principal or professor, University lecturer, assistant, recognised teacher or examiner, or any other person employed in teaching or examining.

7. To appoint from persons not being members of Senate one third of the members of any standing committee or committees charged, by ordinance of the Commissioners, with superintendence of University libraries or museums, and to review any decision of the Senate regarding the recommendations of such committee or committees.

8. To appoint committees of its own number, consisting of not less than five members, to report on any business entrusted to them or to carry out special instructions.

9. To elect the representative of the University on the General Medical Council, under the Medical Act, 1886.

10. After the expiration of the powers of the Commission to found new professorships with the approval of the Universities Committee.<sup>2</sup> After such expiration no new professorship shall be founded otherwise.

By Section 21 of the Act of 1889 the University Court has power to make new ordinances, with the approval of His Majesty in Council:

1. With respect to the appropriation of the sum allotted to the University by the Commissioners out of the annual grant.

2. Altering or revoking any of the ordinances affecting the University which have been or may be framed and passed under the Act of 1858 or the Act of 1889, and making new ordinances: provided that such ordinances, before being submitted to His Majesty for approval, have been communicated by the University Court to the Senate, the General Council, and the University Courts of the other Universities, and have been laid for twelve weeks before both Houses of Parliament.

The Court is entrusted with the patronage of several of the Professorships, appoints the additional Examiners for Degrees, and is a court of final appeal in any dispute which may arise in

<sup>1</sup> Ordinance No. 144, which was issued on 29th March, 1895, and came into force immediately after the expiration of the powers of the Commissioners (1889), empowers the University Court at any time to revise and adjust the terms of the commission to be issued at the next vacancy of any chair, with regard to the number of lectures and the period of instruction.

<sup>2</sup> Ordinance No. 144 enjoins the University Court before proceeding to the foundation of any new Professorship, to ascertain that there are sufficient means for its endowment, and also to take into consideration the contingent claim which the Professor may have to a pension.



making up the Register of the General Council. Seven Members of the Court constitute a quorum. The Rector is President—in his absence, the Principal.

### SENATUS ACADEMICUS.

The Senatus Academicus consists of the Principal and the whole of the Professors, and is entrusted with the regulation and superintendence of the teaching and discipline of the University. It appoints two-thirds of the members of any standing committee or committees charged by ordinance of the Commissioners with the immediate superintendence of University libraries or museums. It receives in the first instance all reports by such committee or committees, and, subject to the review of the University Court, it may confirm, modify, or reject the recommendations in such reports. The Senate continues to possess and exercise the powers possessed by it before the passing of the Act of 1889 so far as they are not modified or altered by that Act or by the Act of 1858. The Principal, as President, has a deliberative and a casting vote. One third of the Senate constitute a quorum.

### FACULTIES.

The Universities Commissioners, by Ordinance No. 31, dated 5th June, 1893, as amended by the University Court Ordinance No. viii., dated 12th February, 1903, settled the constitution of the several Faculties in this University, as follows:—I. The Faculty of Arts consists of the Professors of the following subjects, viz., English Language and Literature, Humanity, Greek, Hebrew and Semitic Languages, Mathematics, Natural Philosophy, Logic and Rhetoric, Moral Philosophy, History, Political Economy.<sup>1</sup> II. The Faculty of Science consists of the Professors of the following subjects, viz., Mathematics, Natural Philosophy, Astronomy, Chemistry, Zoology, Geology, Botany, Anatomy, Physiology, Civil Engineering and Mechanics, Naval Architecture. III. The Faculty of Medicine consists of the Professors of the following subjects, viz., Chemistry, Zoology, Botany, Anatomy, Physiology, Pathology, Materia Medica, Medicine, Surgery, Midwifery, Forensic Medicine, Clinical Medicine, Clinical Surgery.

<sup>1</sup> See Ordinance No. 149, Section i.

IV. The Faculty of Law consists of the Professors of the following subjects, viz., Law, Forensic Medicine, Conveyancing, Political Economy.<sup>1</sup> V. The Faculty of Divinity consists of the Professors of the following subjects, viz., Divinity, Divinity and Biblical Criticism, Ecclesiastical History, Hebrew and Semitic Languages. The University Court has power to transfer Chairs from one Faculty to another, and in the event of the foundation of new Chairs, to determine to which Faculty or Faculties such Chairs shall belong.

The Professors constituting each Faculty annually elect one of their number to be Dean of the Faculty.

### LECTURERS.

By Ordinance No. 17<sup>2</sup> of the Universities Commission (1889), the University Court is empowered to appoint, after consultation with the Senatus, Lecturers, whose teaching shall (unless otherwise determined by the University Court) qualify for graduation. They are appointed for a period not exceeding five years, but may be re-appointed. University Assistants or Demonstrators are eligible for appointment as Lecturers and *vice versa*; and both offices may be held at the same time by the same person.

Ordinance No. 65 provides that the classes of University Lecturers shall be conducted at the seat of the University, *i.e.* in the city of Glasgow and the immediate neighbourhood thereof, that no classes conducted by Lecturers elsewhere shall qualify for graduation in any Faculty, and that University Lecturers shall be in all respects subject to the discipline of the Senatus Academicus and of the University Court.

### BOARDS OF STUDIES.

By Ordinance No. 11 of the Universities Commission (1889), it is provided that the Senate shall institute Boards of Studies corresponding as nearly as may be to the departments of study for graduation in Arts. Each Board of Studies consists of the Principal, the Dean of the Faculty of Arts, and such other members of the Senate and Lecturers in the

<sup>1</sup> See Ordinance No. 119, Section i.

<sup>2</sup> This ordinance is printed at length in the University Calendar for 1893-94, at pp. 504, 505.

University as the Senate may from time to time select, a member of the Board being appointed Convener by the Senate. The functions of these Boards are defined in Ordinance No. 11, sections xviii. and xix.

Provision is made in Ordinance No. 42 for the institution of one or more Boards of Studies in each of the Faculties of Medicine and Science. In Medicine the constituent members of the Board or Boards are Professors in the Faculty of Medicine, together with such Professors in other Faculties whose subjects qualify for graduation in Medicine, and such Lecturers in the University as the Senate may from time to time select. The Board or Boards of Studies in Science are similarly constituted *mutatis mutandis*. The Dean of the Faculty of Medicine is Convener of each Board of Studies in Medicine; the Senate appoints the Convener of each Board of Studies in Science.

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#### UNIVERSITY ASSISTANTS OR DEMONSTRATORS.

By Ordinance No. 17<sup>1</sup> of the Universities Commission (1889), the University Court is empowered to determine, after consultation with the Senatus, the number and grade of the Assistants, if any, to be assigned to each Professor. The appointments are made by the University Court on the recommendation of the Professors. The duties of each Assistant are defined by the Professor, with the approval of the Senate. The Assistants are recognized as Officers of the University, and are styled University Assistants or Demonstrators, as the University Court may determine.

The Arnott and Thomson Demonstratorship, founded in 1875, is attached to the Chair of Natural Philosophy; the Muirhead Demonstratorship, founded in 1877, to the Chair of Physiology; and the Baxter Demonstratorship in Geology, founded in 1889, to the Chair of Geology.

There is also an Assistantship to the Professor of Engineering, which was founded in 1876 by the bequest of Mrs. Black, widow of the Rev. Dr. Black, Barony Church, Glasgow, and designated, in memory of her father, the Young Assistantship. The appointment is made by the University Court in conjunction with the Professor of Engineering.

<sup>1</sup> See second note on page 44.

## EXAMINERS FOR DEGREES.

By Ordinance No. 13, Sections xiv.—xvi., of the Universities Commission (1889), the Examiners for graduation in Arts, Science, and Medicine respectively are the Professors whose subjects qualify for graduation, together with such Lecturers in the University and such additional Examiners, appointed by the University Court, as the Court may deem necessary. In the case of Medicine, the Court is required to make such provisions as will ensure that every candidate shall be examined in each subject by at least two Examiners, one of whom shall not be a Professor or Lecturer in the University.

By Ordinances No. 39, Section vii., and No. 40, Section vii., of the Universities Commission (1889), the Examiners for graduation in Law are the Professors and Lecturers whose subjects qualify for graduation, and additional Examiners appointed by the University Court.

By Ordinance No. 63, Section ii., of the Universities Commission (1889), the Examiners for graduation in Divinity are the Professors of or Lecturers on the subjects included in the examinations, and two additional Examiners appointed by the University Court.

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GENERAL COUNCIL.

The General Council as constituted by the Scottish Universities Act, 1858 (21 and 22 Vict., chap. 83), by the Representation of the People (Scotland) Act, 1868 (31 and 32 Vict., chap. 84), and by the Universities Elections Amendment (Scotland) Act, 1881 (44 and 45 Vict., chap. 40), consists of the following *ex officio* Members, viz., the Chancellor, the Members of the University Court from and after their first election, and the Professors, and also of the following persons after registration, viz., all Masters of Arts of the University, and all persons on whom the University has, after examination, conferred the Degree of Doctor of Medicine, or Doctor of Science, or Bachelor of Divinity, or Bachelor of Laws, or Bachelor of Medicine, or Bachelor of Science, or any other Degree instituted since 13th July, 1868; and also all persons who, previous to the 2nd August, 1861, had, as matriculated students, given regular attendance on the course of study in this University for four

complete sessions, or such regular attendance for three complete sessions in this University, and regular attendance for one such complete session in any other Scottish University, the attendance for at least two of such sessions having been on the course of study in the Faculty of Arts.

Members of the Council must have their names enrolled in a book kept for the purpose by the Registrar. The Register of the Council is made up annually in the month of December, for the year following, and includes the names of all members entered on the Registration Book on or before the 30th day of November in each year. The Registration Fee, which is a payment for life, is 20s.

By section 16 of the Act 44 and 45 Vict., chap. 40, it is enacted that no person shall be allowed, after examination, to graduate at any of the Universities of Scotland until he shall have paid the Registration Fee; and it is further enacted that every person who has hitherto been, or who shall in the future become, *ex officio*, a member of the General Council of any of the Universities shall, on payment of the Registration Fee, be put and continued on the Register of Members of General Council of such University during his life, and shall be entitled to all the privileges of a Member of Council. The Act also provides that no person, subject to any legal incapacity, shall be entitled to vote at any parliamentary election, or exercise any other privilege as a member of the General Council.

The corrupt payment of any Registration Fee is punishable as bribery.

The Council meets twice every year—viz., on the last Wednesday of October, and the first Wednesday of April. In addition to these statutory meetings the Council may hold special meetings at the instance of the Chancellor, who shall convene such meetings on a requisition from a quorum of members, and the Council may adjourn any meeting, and may appoint committees to investigate into and report upon any matter remitted to them, or to carry out instructions given to them by the Council. The quorum of the General Council has been fixed by the Universities Commissioners at ten for every complete thousand or fraction of a thousand on the Register, so that for the present year seventy members are requisite to constitute a quorum, there being 6914 names on the Register, but this provision does not apply to the statutory half-yearly meetings. It is competent to the Council

to take into consideration all questions affecting the well-being and prosperity of the University, and to make representations from time to time to the University Court, who shall return to the Council their deliverances thereon. The annual reports as to the statistics of attendance and as to the finances of the University, made by the University Court to the Secretary for Scotland, are to be laid by him before the General Council. To it are also to be communicated all new ordinances, or changes of existing ordinances, which may be proposed by the University Court.

The Chancellor and four of the Assessors in the University Court are elected by the Council. The manner in which these officers are elected is regulated by Ordinance No. 9 of the Universities Commission (1889). The President of the Council is the Chancellor; whom failing, the Rector; whom failing, the Principal; whom failing, the Chancellor's Assessor; whom failing, the Rector's Assessor. In the absence of all these officials, a Chairman shall be elected by the meeting; but in the election of Assessors the members of Senate may not take part.

The General Councils of the Universities of Glasgow and Aberdeen jointly return a representative to Parliament. The Vice-Chancellor of Glasgow University is the returning officer.

*Members of Parliament for the Universities of Glasgow and Aberdeen.*

1868. Right Hon. James Moncrieff, LL.D., Lord Advocate.

1869. Right Hon. Edward S. Gordon, LL.D., Dean of the Faculty of Advocates.

1876. Right Hon. William Watson, LL.D., Lord Advocate.

1880. Right Hon. James Alexander Campbell, LL.D.

1906. SIR HENRY CRAIK, K.C.B., LL.D.

#### STUDENTS' REPRESENTATIVE COUNCIL.

The constitution and functions of the Students' Representative Council are regulated by Ordinance No. 60, the provisions of which are as follows:—

I. The Students' Representative Council in each University shall submit to the University Court for approval the regulations under which it has been formed or now exists, and these

regulations as approved, or with such alterations as may from time to time be approved by the University Court, shall form the constitution of the Students' Representative Council, and shall, subject to the provisions of this Ordinance, determine the functions thereof, and the mode of election thereto.

II. After the University Court has approved of the constitution of a Students' Representative Council in any University, alterations in the said constitution shall be of no effect unless and until they shall receive the approval of the University Court.

III. (1) The Students' Representative Council shall be entitled to petition the Senatus Academicus with regard to any matter affecting the teaching and discipline of the University, and the Senatus Academicus shall dispose of the matter of the petition, or shall, if so prayed, forward any such petition to the University Court, with such observations as it may think fit to make thereon.

(2) The Students' Representative Council shall be entitled to petition the University Court with regard to any matter affecting the students other than those falling under the immediately preceding sub-section.

(3) Nothing contained in this section shall be held to prejudice any right of appeal which may be competent under section 6, sub-section 2, of the Universities Act, 1889, nor the powers and jurisdiction of the Senatus Academicus with regard to the teaching and discipline of the University.

The Council at present consists of representatives (both men and women) from the different Faculties in the University, and its aims are (1) to represent the Students in matters affecting their interests; (2) to afford a recognized means of communication between the Students and the University authorities; (3) to promote social and academic unity among the Students. A Union Committee appointed by the Council completed in Session 1889-90 the arrangements for opening the "Glasgow University Union." The Council has various Sub-Committees—an Inter-Universities Committee, a Magazine Committee, which conducts during the winter session the "Glasgow University Magazine" (published weekly), an Amusements Committee, a Lodgings Committee, and a Book Exchange Committee.

*Presidents of the Students' Representative Council.*

1885-86. R. M. Wenley, M.A.	1897-98. Arth.S.Middleton, M.A.
1886-87. Gavin Lambie, M.A.	1898-99. James M. Black, M.A.
1887-88. C. E. Robertson, M.B., C.M.	1899-1900. Ivy M'Kenzie, M.A., B.Sc.
1888-89. John H. Harley, M.A.	1900-1901. John Muir, B.Sc.
1889-90. Robert Bell, M.B., C.M.	1901-2. E. R. Mitchell, M.A.
1890-91. William Newlands.	1902-3. D. A. Dick.
1891-92. John White, M.A.	1903-4. G. J. Spreull, LL.B.
1892-93. R. S. Horne, M.A.	1904-5. F. W. Saunders, B.D.
1893-94. John H. Pagan, B.D.	1905-6. R. H. Napier, M.A.
1894-95. W. M. R. Pringle, M.A.	1906-7. J. C. Watson.
1895-96. John S. Thomson, M.A.	
1896-97. Hyam Goodman, M.A.	

## STUDENTS

## Number of Students in the several Faculties :

	WHOLE SESSION, 1905-6.	SUMMER, 1906.	TOTAL.
MEN.			
In Arts, - - - - -	661	10	671
Science, - - - - -	244	4	248
Theology, - - - - -	43	—	43
Medicine, - - - - -	562	74	636
Law, - - - - -	206	1	207
Arts and Medicine, - - - - -	6	—	6
Arts and Science, - - - - -	6	—	6
Science and Medicine, - - - - -	1	—	1
Arts and Law, - - - - -	1	—	1
Arts and Theology, - - - - -	2	—	2
Single class enrolment, - - - - -	31	—	31
	1763	89	1852
WOMEN.			
In Arts - - - - -	428	—	428
Science, - - - - -	9	—	9
Medicine, - - - - -	47	11	58
Arts and Medicine, - - - - -	2	—	2
Single class enrolment, - - - - -	6	—	6
	492	11	503
Total, - - - - -	2255	100	2355



						WHOLE SESSION, 1906-7.	SUMMER, 1907.	TOTAL.
MEN.								
In Arts, - - - - -	-	-	-	-	-	686	10	696
Science, - - - - -	-	-	-	-	-	269	7	276
Theology, - - - - -	-	-	-	-	-	56	—	56
Medicine, - - - - -	-	-	-	-	-	558	74	632
Law, - - - - -	-	-	-	-	-	203	—	203
Arts and Medicine, - - - - -	-	-	-	-	-	1	—	1
Arts and Science, - - - - -	-	-	-	-	-	8	—	8
Science and Medicine, - - - - -	-	-	-	-	-	4	—	4
Arts and Law, - - - - -	-	-	-	-	-	2	—	2
Science and Law, - - - - -	-	-	-	-	-	1	—	1
Single class enrolment, - - - - -	-	-	-	-	-	36	3	39
						1824	94	1918
WOMEN.								
In Arts, - - - - -	-	-	-	-	-	511	1	512
Science, - - - - -	-	-	-	-	-	9	—	9
Medicine, - - - - -	-	-	-	-	-	50	8	58
Single class enrolment, - - - - -	-	-	-	-	-	7	—	7
						577	9	586
Total, - - - - -						2401	103	2504

Ordinance No. 50 of the Universities Commission (1889) requires that each student shall pay a matriculation fee of One Guinea, at the commencement of each winter session, for the whole academical year then next ensuing; and any student desirous of attending a class or classes during a summer session, without having matriculated at the commencement of the immediately preceding winter session, shall in respect of such summer session pay a matriculation fee of half a guinea. Ordinance No. 147 contains the following regulation with regard to matriculated students:—No person shall be deemed to be a matriculated student in any University or shall enjoy any of the privileges of a matriculated student unless, in addition to paying the matriculation fee, he is enrolled as a student in attendance in one or more classes in the University, and has paid the fees entitling him to such attendance: provided that nothing herein contained shall affect the right of the University Court to exact a fee in lieu of and not exceeding the matriculation fee from any candidate for any

examination or for graduation, not being at the time a matriculated student, in addition to the fee payable for such examination or graduation. The University Court is empowered in special circumstances to permit persons who have not matriculated to attend any single class in any Faculty, on payment of an Entrance Fee of Five Shillings in addition to the authorized class fee, subject to the following provisions, viz. :—(1) That attendance on any class without payment of the matriculation fee shall not qualify for graduation in any Faculty, (2) that persons who have not paid the matriculation fee shall not be entitled to a certificate of attendance on any class, and (3) that payment of such entrance fee shall not confer any University privilege other than the right of attendance on such class. Men students matriculate at the University, and women students at Queen Margaret College, on and after 16th October. Matriculation closes on 1st November.

Students are entitled, after matriculation, to the privilege of admission to the University Library and to the Hunterian Museum; they are also entitled to vote for the Lord Rector. They are classified as students in Arts, Science, Medicine, Law, and Divinity, according to the nature of their studies; and they are likewise, for academical purposes, divided into *Togati* and *Non-Togati*—the students of the Humanity, Greek, Logic, Ethics, and Natural Philosophy classes being *Togati* or gown students, from being required to wear the ancient academical robe—a scarlet cloak.

Under the *Non-Togati*, or ungowned students, are comprehended all those who, having finished their course of instruction in Arts, are prosecuting their studies in the other Faculties, with a more immediate view to their intended professions; and it comprises also other persons resident in the city or its vicinity, who, though engaged in other avocations, are disposed to cultivate literary pursuits, or to extend their acquaintance with some favourite branches of learning or science, by attending the lectures given at the University.

A distinction is also made between Public and Private students. The former are required to undergo examinations, and to read or perform exercises on the subjects treated of in the lectures,—and they only are allowed to reckon their sessions of study as a qualification for proceeding to degrees in the several Faculties.

By Ordinance No. 18<sup>1</sup> of the Universities Commission (1889) the University Court was empowered to admit women to graduation, and to provide for their instruction, either by admitting them to the ordinary classes, or by instituting separate classes for their instruction. Under this ordinance women were for the first time admitted as matriculated students of this University in Session 1892-93.

Medical students have access, for the usual attendance in the wards and on the Clinical Lectures, to the Royal Infirmary situated in the Eastern part of the city, and to the Western Infirmary in the immediate vicinity of the University. In the Royal Infirmary certain wards are appropriated to the clinical instruction of women.

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#### UNIVERSITY CHAPEL.

The University Chapel is under the management of a Committee of Senate, of which the Principal is Convener.

Public Worship is celebrated on certain Sundays during the Winter Session at 2.30 P.M., in the Bute Hall. The services are conducted by graduates of this University and other clergymen of various denominations.

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#### GYMNASIUM.

This building was erected by public subscription, and fitted according to the most improved models, under the superintendence of the late Mr. Maclaren of Oxford, at a total cost of £2600, and was opened for the first time in January, 1872.

Gymnastic, Physical Culture, Boxing, and Fencing classes are held during the session. Mr. James Hughes conducts the classes in Gymnastics and Fencing, and Mr. John Boyle is Instructor in Boxing. Gymnastic classes meet on three days a week, to be arranged, from 10 A.M. to 1 P.M., and from 4.30 P.M. to 5.30 P.M. Each class meets three times a week, and students may join any class which is convenient for them.

Gentlemen not connected with the University are admitted to the use of the Gymnasium, and a special evening class is formed for their benefit, which meets on Mondays and Thursdays

<sup>1</sup> This ordinance is given in full in the *University Calendar* for 1892-93, pp. 504-506.

from 8 p.m. till 10 p.m. Students may join this class, if they wish.

*Fees.*—Gymnastics. *For all Students:* One month, 5s.; Two months, 8s. 6d.; Three months, 12s.; Six months, 20s. *For Non-Students:* the Quarter (*i.e.* twice a-week for three months), 15s.; whole season (seven months), 35s. Fencing and Boxing: 10s. for a course of twelve lessons. Special arrangements are made for the summer session.

The Oxford Silver Medal, presented annually by the late Mr. Maclaren, for competition among the students, is continued by the Gymnasium, and, at the competition in February, 1907, was gained by Herbert A. Stewart. For the Oxford Bronze Medal, open to non-students, there were no entries this year.

A Badge presented by the Ladies of the University is awarded to the runner-up in the medal competition; in 1907 it was gained by Alexander P. Young.

In 1899 Professor Ramsay presented to the Gymnasium a Silver Challenge Cup for annual competition among teams representing the four Nations into which students are divided in voting at the Rectorial elections. In the competition held in February, 1907, the winning team was Loudoniana, composed of the following members: J. L. Ewan (Captain), W. S. Owen, W. J. Smith, and E. A. Smith.

Gymnastic classes for members of Queen Margaret College are also arranged.

The Gymnasium is managed by a joint-committee of professors and students.

*Hon. President,* Professor F. O. Bower, Sc.D., F.R.S.

*Hon. Treasurer,* Alan E. Clapperton, B.L., 91 West Regent Street, Glasgow.

*Hon. Secretary,* Adam Patrick, M.A., 7 Bute Mansions, Glasgow, W.

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#### ARMY COMMISSIONS FOR UNIVERSITY CANDIDATES.

1. Graduates in Arts or in Science of this University, and students who have passed all the examinations for the Degree of M.A. or for the Degree of B.Sc., are eligible for Commissions in the Cavalry and Infantry of the line. The limits of age are from 17 to 23.

2. Students of this University who have passed "the Examination of Candidates for the Army," are also eligible for Commissions. They are required to attend one class in each of the following three departments, viz.: (a) Latin or Greek; (b) Logic or Moral Philosophy or English Literature; (c) Mathematics or Natural Philosophy,—and to pass the examination on the M.A. standard in the three subjects in which they have attended classes. The limits of age in this case are from 17 to 22.

Candidates for Certificates of having passed the Examination for the Army must enter their names and pay the Fees at the Matriculation Office at the same times as Candidates for the M.A. Examinations. The Fee for the Examination is Two Guineas.

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#### TRAINING FOR THE HOME CIVIL SERVICE, THE INDIAN CIVIL SERVICE, AND EASTERN CADETSHIPS.

The Senate desire to make known the facilities offered to the students of the University who wish to prepare for the open competition for these appointments while carrying on their studies for the M.A. or B.Sc. degree. The range of subjects and the scale of marks are well adapted to the course of study pursued by the student for the Honours degree in Arts. Intending candidates should in all cases read for Honours—in at least one group. The age limits allow ample time for a second Honours school—if thought advisable; and the combination of Classical Honours with those of any of the other departments—such as Mathematics and Natural Philosophy, History, English, Philosophy, Economic Science, or Modern Languages—would be extremely valuable for the purpose. Students of Mathematics may be more fitted to take up the scientific subjects—Physics, Chemistry, Botany, Zoology, Geology, etc. Suitable preparation for these will be found in the courses for the degree of B.Sc. in Pure Science, and it is believed that the regulations now in force will make these subjects specially valuable to students of this University. Some of the courses for the degrees in Law are also recommended to candidates.

The following table shows the subjects of examination, with the marks assigned to each, and also the classes in the University which are suitable in each case.

N. B.—*The regulations are liable to alteration from year to year.*

<i>Subject of Examination.</i>	<i>Marks.</i>	<i>Classes in the University.</i>
Latin, not less than two subdivisions, of which one must be Translation :		
Translation, - - - - -	300	Latin : Honours.
Composition, - - - - -	300	Latin : Honours.
Literature, - - - - -	300	Latin : Honours.
Roman History, - - - - -	500	Latin : Honours ; Roman Law.
Roman Law, - - - - -	500	Roman Law.
Greek, not less than two subdivisions, of which one must be Translation :		
Translation, - - - - -	300	Greek : Honours.
Composition, - - - - -	300	Greek : Honours.
Literature, - - - - -	300	Greek : Honours.
Greek History, - - - - -	500	Greek : Honours.
Mathematics, - - - - -	1200	{ Mathematics : Intermediate and Advanced Honours. Natural Philosophy : Ordinary and Honours (both sections).
Advanced Mathematics, - - - - -	1200	
Natural Science, <i>i.e.</i> any number not exceeding four of the following :		
Chemistry, - - - - -	600	Chemistry and Chemical Laboratory.
Physics, - - - - -	600	{ Natural Philosophy : Ordinary ; and Physical Laboratory.
Geology, - - - - -	600	Geology and Geological Laboratory.
Botany, - - - - -	600	Botany and Botanical Laboratory.
Zoology, - - - - -	600	Zoology and Zoological Laboratory.
Animal Physiology, - - - - -	600	{ Physiology and Physiological Laboratory.
English Composition, - - - - -	500	English : Ordinary.
English Language and Literature, - - - - -	600	English : Ordinary and Honours.
English History, either or both sections may be taken :		
I. To A.D. 1485, - - - - -	400	{ History : Ordinary.
II. A.D. 1485 to 1818, - - - - -	400	{ Constitutional Law and History.
General Modern History (Special Period), - - - - -	500	History : Honours.
Logic and Psychology, - - - - -	600	Logic : Ordinary and Honours.
Moral and Metaphysical Philosophy, - - - - -	600	{ Moral Philosophy : Ordinary and Honours.
Political Economy and Economic History, - - - - -	600	{ Political Economy : Ordinary and Honours.
Political Science, <sup>1</sup> - - - - -	500	Political Philosophy.
English Law, - - - - -	500	
French Language and Literature, - - - - -	600	French : Ordinary and Honours.
German " " " - - - - -	600	German : Ordinary and Honours.
Italian, " " " - - - - -	600	Italian : Ordinary and Honours.
Sanskrit " " " - - - - -	600	
Arabic " " " - - - - -	600	Arabic : Ordinary and Honours.

<sup>1</sup> Preparation for this subject may also be obtained in the Moral Philosophy (Honours) Class, in the Political Economy (Honours) Class, and in certain of the Law Classes.

“Candidates are at liberty to name any of these branches of knowledge, with the proviso that the maximum number of marks that can be obtained from the subjects chosen is limited to 6000. If this maximum is exceeded by a candidate's selection he will be required to indicate one of his subjects, the marks for which should, in his case, be reduced so as to bring his maximum marks within the prescribed limits.” The marks assigned in each branch will be subject to such deduction as the Civil Service Commissioners may deem necessary in order to secure that no credit be allowed for merely superficial knowledge. No deduction will be made in the subjects of English Composition and Mathematics, but a corresponding deduction will be made from the reduced maximum of the subject selected by the candidate whose total maximum exceeds the limit of 6000 marks.

Candidates must have attained the age of 22, and must not have attained the age of 24, on the first day of August of the year in which the examination is to be held.

Students who propose to enter for this examination are strongly advised to determine at the beginning of their course what line of study they can best follow, and to acquaint their Professors or Lecturers with their plans. Full particulars with regard to the competition will be found in the publications of the Civil Service Commission, which may be consulted in the University Reading Room.

There are many other openings for University graduates in various departments of the public service both at home and abroad. The information regarding some of them which is tabulated on the following page may be found useful:—

SERVICE.	Limit of Age.	Mode of Entrance.	Time when held.	University Standard required.
Commissions in the Regular Forces — Army. Indian Army.	20-25 20-24	Training and Examination.	March and October.	M.A. or B.Sc.
Indian Forest Service.	18-22	Nomination.	July.	—
Indian Police Force.	19-21	Examination.	June.	Honours.
Egyptian Civil Service. Soudanese Civil Service.	About 22 or 23	Nomination through Committee for External Examin.	—	Fair Honours, and Athletics.
Student Interpreters — 1. Ottoman Dominions, Persia, Greece, and Morocco. 2. China, Japan and Siam.	18-24	Examination.	No fixed date.	Good Honours.
Indian Public Works — Engineers.	21-24	Nomination.	May.	B.Sc.
Assistant Examiner in Patent Office.	20-25	Examination.	May.	B.Sc.
Examiners in Exchequer and Audit Departments. Accountants in Army Accounts Department. Supply and Accounting Department of Admiralty. Royal Ordnance Factories of the War Office.	18-20	Examination.	November.	Good Ordinary Degree.

*N.B.*—Names of Candidates have to be entered usually three months before the date of the examination or appointment.

The Senate has appointed a Committee to disseminate information and to give advice with regard to all external examinations. This Committee consists of Professors Jack, Jones, Smart, Phillimore, Gray, Medley, Bower, Latta, and Mr. J. M. Irvine—Professor Medley, convener and secretary.



## II.—TABLE OF UNIVERSITY FEES.

### I.—MATRICULATION FEES [Ord. No. 50, Sec. i.].

At the commencement of each Academical Year, which extends from 1st October to 30th September, and includes both Winter and Summer Sessions, ...	£1	1	0
At the commencement of each Summer Session, if the Student has not matriculated for the Academical Year then current, ... ..	0	10	6

### II.—ENTRANCE FEES [Ord. No. 50, Sec. ii.].

On admission of persons who are not matriculated Students to any single class, <i>if permitted by the University Court in special circumstances</i> , ..	0	5	0
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N.B.—Attendance under this Regulation does not qualify for Graduation, and no Certificate for such attendance is given. The Entrance Fee confers no University privileges other than the right of attendance above mentioned.

### III.—ENROLMENT FEES [Ord. No. 12, Sec. v., Ord. No. 14, Sec. viii. 5, Ord. No. 23, Sec. vi., Ord. No. 134, Sec. v.].

At the commencement of each year of attendance on the lectures of Extra-Academical Teachers in Glasgow, whose Lectures are recognised for Graduation in Medicine or Science. ... ..	1	1	0
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### IV.—EXAMINATION FEES.

Preliminary Examinations in Arts, Science, or Medicine  
—[Ord. No. 13, Sec. xii.].

On each entry for Examination, ... ..	0	10	6
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Degree of Master of Arts (M.A.)—[Ord. No. 50, Sec. iii.].

The Fee for this Degree is ... ..	5	5	0
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Payable £1 1s. on entering for Examination in each subject till £5 5s. are paid.

Degree of Bachelor of Science (B.Sc.)—[Ord. No. 50, Secs. iv.–vii.].

The Fee for this Degree is ... ..	6	6	0
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Payable £1 1s. on entering for Examination in each subject till £6 6s. are paid.

Diploma in Education—

On entering for Examination, ... ..	2	2	0
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Certificate in Engineering Science—

On entering for last subject of Examination, ...	1	1	0
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Degree of Doctor of Letters (D.Litt.)—[Ord. No. 62, Sec. xv.].

On lodging Thesis, ... ..	10	10	0
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Degree of Doctor of Philosophy (D.Phil.)—[Ord. No. 62, Sec. xiv.].

On lodging Thesis, ... ..	10	10	0
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Degree of Doctor of Science (D.Sc.)—[Ord. No. 50, Secs. viii.–x.].

On lodging Thesis, ... ..	10	10	0
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Degrees of Bachelor of Medicine (M.B.), and Bachelor of Surgery (Ch.B.)—[Ord. No. 14, Sec. xxiii.].			
On entering for First Professional Examination, ...	£6	6	0
„ Second „ „ ...	6	6	0
„ Third „ „ ...	5	5	0
„ Fourth „ „ ...	5	5	0
Degree of Doctor of Medicine (M.D.)—Old Regulations—			
On lodging Thesis, ...	5	5	0
Degree of Doctor of Medicine (M.D.)—New Regulations —[Ord. No. 14, Sec. xxiii.].			
On entering for Examination, ...	10	10	0
Degree of Master of Surgery (Ch.M.)—[Ord. No. 14, Sec. xxiii.].			
On entering for Examination, ...	10	10	0
Degree of Bachelor of Laws (LL.B.)—[Ord. No. 50, Sec. xii.].			
The Fee for this Degree is ...	6	6	0
Payable £1 1s. on entering for each subject till £6 6s. are paid.			
Degree of Bachelor of Law (B.L.)—[Ord. No. 50, Sec. xi.].			
The Fee for this Degree is ...	5	5	0
Payable £1 1s. on entering for each subject till £5 5s. are paid.			
Degree of Bachelor of Divinity (B.D.)—[Ord. No. 50, Sec. xiii.].			
On entering for Examination in First Department, ...	2	12	6
„ „ Second „ „ ...	2	12	6
Examination of Candidates for the Army—			
On entering for Examination, ...	2	2	0

V.—CLASS FEES (*see* pages 61—66 and 162, 163).

## VI.—LIBRARY FEES [Ord. No. 64, Secs. x.—xiii.].

Each Member of the General Council, each year (commencing 14th October) in which he wishes use of Library, ...			
	0	10	6
Or,			
This may be compounded for by a single payment of ...	5	5	0
Every Matriculated Student enrolled in a Class, and every Extra-Mural Student, who wishes use of Library, a <i>deposit</i> of ...			
	1	0	0
Special Readers—each year in which the privilege is granted, ...			
	0	10	6

## VII.—REGISTRATION FEE.

All Candidates proceeding to Graduation after Examination who are not already members of the General Council are required by the Act 44 and 45 Vict., Ch. 40, to pay the Registration Fee, with a view to their names being enrolled in the General Council. The Fee is ..			
	1	0	0

## III.—SEPARATE FACULTIES AND CLASSES.

The University Classes will meet as follows, daily, unless otherwise specified :—

## WINTER SESSION 1907-8.

## I.—ARTS.

THURSDAY, 17TH OCTOBER, 1907.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Latin,</i> . . . . .	9 a.m. and 1 p.m.,	£4 4 <sup>1</sup>	} PROF. PHILLIMORE.
— <i>Honours,</i> . . . . .	1 p.m.,	3 3	
— <i>Prose,</i> . . . . .	11 a.m., Thurs.,	1 1	
<i>Greek,</i> . . . . .	8 a.m.,	4 4 <sup>1</sup>	} PROF. DAVIES.
— <i>Honours,</i> . . . . .	12 noon,	3 3	
— <i>Prose,</i> . . . . .	12 noon, once weekly,	1 1	
<i>English,</i> . . . . .	11 a.m.,	4 4 <sup>1</sup>	} PROF. DIXON.
— <i>Second Session,</i> . . . . .	11 a.m. three days weekly,	2 2	
— <i>Honours,</i> . . . . .	12 noon,	3 3	
<i>British History, Honours,</i> . . . . .	10 a.m., Mon., Wed., Fri.,	3 3	} Mr. K. K. M. Leys.
<i>French,</i> . . . . .	11 a.m.,	4 4 <sup>1</sup>	
— <i>Honours,</i> . . . . .	12 noon, three or four days weekly,	3 3	
<i>German,</i> . . . . .	10 a.m.,	4 4 <sup>1</sup>	} Dr. George P. Thistlethwaite.
— <i>Honours,</i> . . . . .	12.30 p.m. Mon., Thurs., and alternate Wed.,	3 3	
<i>Italian,</i> . . . . .	(see p. 78),	4 4 <sup>1</sup>	} Signor F. Agnoletti.
— <i>Honours,</i> . . . . .	(see p. 79),	3 3	
— <i>Elementary,</i> . . . . .	(see p. 78),	2 2	
<i>Hebrew, Junior,</i> . . . . .	10 a.m.,	3 3	} — — —
— <i>Senior,</i> . . . . .	9 a.m.,	4 4 <sup>1</sup>	
— <i>Honours,</i> . . . . .	12 noon, Tu., Wed., Th.,	3 3	
<i>Arabic or Syriac,</i> . . . . .	(see p. 148),	2 2	} Dr. Geo. Henderson.
<i>Celtic,</i> . . . . .	4 p.m.,	4 4 <sup>1</sup>	
<i>Logic and Metaphysics,</i> . . . . .	9 a.m.,	4 4 <sup>1</sup>	
— <i>Honours,</i> . . . . .	11 a.m., three or four days weekly,	3 3	} PROF. LATTA.
<i>Moral Philosophy,</i> . . . . .	8 a.m.,	4 4 <sup>1</sup>	
— <i>Honours,</i> . . . . .	12 noon, Mon., Tu., Wed.,	3 3	
<i>Political Philosophy,</i> . . . . .	11 a.m. on Wed., 12 noon on Thur. and Fri.,	3 3	} Dr. R. A. Duff.
<i>Political Economy,</i> . . . . .	2 p.m.,	4 4 <sup>1</sup>	
— <i>Honours,</i> . . . . .	3 p.m.,	3 3	
<i>Education (Theory, History, and Art of),</i> . . . . .	4 p.m.,	4 4 <sup>1</sup>	} Mr. W. Boyd.
<i>Philosophy of Law (see p. 139),</i> . . . . .	4.30 p.m., Mon., Wed., Fri.	3 3	
<i>Mathematics,</i> . . . . .	9 a.m., or 12 noon	4 4 <sup>1</sup>	} PROF. JACK.
— <i>Honours (Intermed.),</i> . . . . .	10 a.m., or 11 a.m.,	4 4 <sup>2</sup>	
— <i>Honours (Advanced),</i> . . . . .	11 a.m., Mon., Wed., Fri.,	4 4 <sup>2</sup>	
<i>Natural Philosophy (Lectures),</i> . . . . .	9 a.m.,	4 4 <sup>1</sup>	} PROF. GRAY.
— (Lectures and Practical Work), [Hours to be arranged],		6 6	
— <i>Honours, Section A.,</i> . . . . .	1 p.m., Mon.; and 12 noon, Wed., Fri.,	4 4 <sup>13</sup>	
— <i>Honours, Section B.,</i> . . . . .	12 noon, Mon., Tu., Th.,	4 4 <sup>13</sup>	}
— <i>Honours, Sections A. &amp; B.,</i> . . . . .		5 5 <sup>4</sup>	
<i>Physical Laboratory,</i> . . . . .	10 a.m. to 4 p.m.,	6 6	
— (Half Session), . . . . .		4 4	

<sup>1</sup> Fee for a Second or subsequent Session, £3 3s.

<sup>2</sup> Fee £3 3s. when a class in Mathematics has already been taken.

<sup>3</sup> Fee for either Honours Course along with or after Ordinary Class, £3 3s.

<sup>4</sup> Fee for both Sections along with or after the Ordinary Class, £4 4s.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Astronomy, First,</i> . . . {	3 p.m., Mon., Wed., and Fri. (see p. 94), . . .	£2 2	} PROF. BECKER.
———— <i>Second,</i> . . . {	3 p.m., Tues., Th., and Fri. (see p. 94), . . .	2 2	
———— <i>First and Second in same Session,</i> . . .		4 4 <sup>1</sup>	
<i>Chemistry,</i> . . . . .	10 a.m., . . . . .	4 4 <sup>1</sup>	} PROF. FERGUSON.
<i>Chemical Laboratory,</i> . . .	10 a.m. to 4 p.m., . . .	10 10	
———— <i>(Half Session),</i> . . .		5 5	
<i>Zoology (Elementary),</i> . . .	9 a.m., . . . . .	4 4 <sup>1</sup>	} PROF. KERR.
<i>Zoological Laboratory (Elementary),</i> . . . {	11 a.m. or 3 p.m., . . .	3 3	
<i>Zoology, Advanced (Jan.),</i> . . .	9 a.m., . . . . .	3 3	
<i>Botany, Advanced,</i> . . . .	3 p.m., . . . . .	3 3 <sup>2</sup>	} PROF. BOWER.
<i>Botanical Laboratory, Advanced (Jan.),</i> . . .	(see p. 109), . . . . .	3 3 <sup>2</sup>	
<i>Botany (Oct. to Dec.),</i> . . . .	2 to 4 p.m., . . . . .	3 3 <sup>8</sup>	
<i>Geology (Lectures and Practical),</i> 4.30 p.m., . . .		5 5	Dr. W. H. Lang.
<i>History,</i> . . . . .	10 a.m., . . . . .	4 4 <sup>1</sup>	} PROF. MEDLEY.
———— <i>Honours,</i> . . . . .	11 a.m., Mon., Wed., Fri.,	3 3	
<i>Constitutional Law and History,</i> . . . . . {	4.30 p.m., . . . . .	4 4 <sup>1</sup>	
———— <i>Honours,</i> . . . . .	12 noon, Mon., Wed., Fri.,	3 3	} Dr. W. S. McKechnie.
<i>Roman Law,</i> . . . . .	5.30 p.m., . . . . .	4 4 <sup>1</sup>	
<i>History of Civil Law (Half Course),</i> . . . . .	5.30 p.m. (see p. 137), . . .	3 3	
Mr. J. M. Irvine.			

II.—SCIENCE.<sup>6</sup>

THURSDAY, 17TH OCTOBER, 1907.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Mathematics,</i>	9 a.m. or 12 noon,	£4 4 <sup>1</sup>	} PROF. JACK.
———— <i>Honours (Intermed.),</i>	10 a.m. or 11 a.m., . . .	4 4 <sup>3</sup>	
———— <i>Honours (Advanced),</i>	11 a.m., Mon., Wed., Fri.,	4 4 <sup>3</sup>	
<i>Natural Philosophy (Lectures),</i>	9 a.m., . . .	4 4 <sup>1</sup>	} PROF. GRAY.
———— <i>(Lectures and Practical Work),</i>	{ [Hours to be arranged],	6 6	
<i>Higher Mathematical A.,</i>	{ 1 p.m., Mon.; 12 noon, Wed., Fri., . . .	4 4 <sup>14</sup>	
———— <i>B.,</i>	12 noon, Mon., Tu., Th.,	4 4 <sup>14</sup>	} PROF. GRAY.
———— <i>A. and B.,</i>	. . .	5 5 <sup>5</sup>	
<i>Physics for Public Health (Half Session),</i>	. . .	2 2	
<i>Physical Laboratory,</i>	10 a.m. to 4 p.m., . . .	6 6	} Mr. James G. Gray.
———— <i>(Half Session),</i>	. . .	4 4	
<i>Electricity,</i>	12 noon, Wed. and Fri.,	3 3	
<i>Astronomy, First,</i>	{ 3 p.m., Mon., Wed., and Fri. (see p. 94), . . .	2 2	} PROF. BECKER.
———— <i>Second,</i>	{ 3 p.m., Tues., Th., and Fri. (see p. 94), . . .	2 2	
———— <i>First and Second in same Session,</i>	. . .	4 4 <sup>1</sup>	
<i>Chemistry,</i>	10 a.m., . . .	4 4 <sup>1</sup>	} PROF. FERGUSON.
<i>Chemical Laboratory,</i>	10 a.m. to 4 p.m., . . .	10 10	
———— <i>(Half Session),</i>	. . .	5 5	
<i>Physical Chemistry,</i>	{ [Hours to be arranged],	3 3 0	} Mr. F. Soddy.
———— <i>Practical Course,</i>	. . .	2 2 0 <sup>7</sup>	
<i>Radio-activity,</i>	(Not in 1907-8), . . .	1 11 6	

<sup>1</sup> Fee for a second or subsequent session, £3 3s.<sup>2</sup> See fourth note on p. 63.<sup>3</sup> Fee £3 3s. when a class in Mathematics has already been taken.<sup>4</sup> Fee for either Higher Course along with or after the Ordinary Class, £3 3s.<sup>5</sup> Fee for both Sections along with or after the Ordinary Class, £4 4s.<sup>6</sup> Any Graduate in Science shall be allowed to enter any Laboratory Course within the curriculum of the degree which he has taken, on payment of half the ordinary fee for such course provided that if the course be required for further graduation he shall pay the full fee.<sup>7</sup> Free to students attending the Chemical Laboratory.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Organic Chemistry, Elem.,</i>	(see p. 112), . . .	£1 1	Dr. T. S. Patterson.
<i>Metallurgical Chemistry,</i>	12 noon, . . .	. 4 4	
<i>Metallurgical Laboratory,</i>	10 a.m. to 4 p.m., . . .	. 5 5 <sup>1</sup>	Dr. C. E. Fawsitt.
<i>Anatomy, Junior,</i>	11 a.m., . . .	. 4 4 <sup>2</sup>	PROF. CLELAND and Demonstrators.
<i>Senior,</i>	1 p.m., . . .	. 4 4 <sup>2</sup>	
<i>Practical Anatomy,</i>	9 a.m. to 4.45 p.m., . . .	. 3 3 <sup>3</sup>	
<i>Physiology,</i>	12 noon, . . .	. 4 4 <sup>2</sup>	
<i>Practical Physiology (in Summer).</i>			
<i>Advanced (see p. 116),</i>	. . .	. 4 4 <sup>2</sup>	PROF. NOËL PATON and Muirhead Demonstrator.
<i>Physiological Laboratory,</i>	(see p. 116), . . .	10 10	
<i>(Half Session),</i>	. . .	. 5 5	
<i>Physiological Chemistry,</i>	. . .	. 2 2	Dr. E. P. Cathcart.
<i>Zoology, Elementary,</i>	9 a.m., . . .	. 4 4 <sup>2</sup>	
<i>Zoological Laboratory, Ele-</i>	11 a.m. or 3 p.m., . . .	. 3 3	PROF. KERR.
<i>mentary,</i>	. . .	. . .	
<i>Zoology, Advanced (Jan.),</i>	9 a.m., . . .	. 3 3	
<i>Botany, Advanced,</i>	3 p.m., . . .	. 3 3 <sup>4</sup>	PROF. BOWER.
<i>Botanical Laboratory, Ad-</i>	(see p. 109), . . .	. 3 3 <sup>4</sup>	
<i>vanced (Jan.),</i>	. . .	. . .	
<i>Geology (Public Health),</i>	4.30 p.m. . . .	. 3 3	PROF. GREGORY.
<i>(Mining), Part I.,</i>	4.30 p.m. . . .	. 3 3	
<i>Part II. (see p. 99),</i>	. . .	. 2 2	
<i>(Agriculture),</i>	4.30 p.m. . . .	. 4 4 <sup>2</sup>	
<i>(Engineering),</i>	4.30 p.m. . . .	. 5 5	
<i>Geology and Mineralogy,</i>	4.30 p.m. . . .	. 5 5	
<i>(Advanced),</i>	5.30 p.m. . . .	. 5 5	
<i>Practical Geology,</i>	4.30 p.m. to 6.30 p.m.	. 3 3 <sup>5</sup>	
<i>Public Health,</i>	12 noon, 4 days weekly,	. 4 4 <sup>2</sup>	PROF. GLAISTER.
<i>Public Health Laboratory,</i>	10 a.m. to 4 p.m., . . .	12 12	PROF. GLAISTER and Assistant.
<i>(Half Session),</i>	. . .	. 6 6	
<i>Engineering, Class I.,</i>	9 a.m., . . .	. 2 2	
<i>II.,</i>	(not in 1907-8).		
<i>III.,</i>	10 a.m., Mon., Wed., Fri.,	. 2 2	PROF. BARR, Lec- turers and Demon- strators.
<i>IV.,</i>	9 a.m. daily, ex. Sat., . . .	. 4 4 <sup>2</sup>	
<i>Engineering Drawing, etc.,</i>	9 a.m. to 5 p.m. daily,		
	except Sat., . . .	. 4 4 <sup>2</sup>	
<i>Engineering Laboratory,</i>	9 a.m. to 5 p.m., . . .	10 10	
<i>(Second Session),</i>	. . .	. 5 5	
<i>Engineering Laboratory, Me-</i>	9 a.m. to 5 p.m., . . .	. 3 3	
<i>chanical or Electrical,</i>	. . .	. . .	
<i>Electrical Engineering, Junior,</i>	8 a.m. Mon., Wed., Fri.,	. 2 2	Mr. J. S. Nicholson.
<i>Senior,</i>	8 a.m. Tues., Thur., Sat.,	. 2 2	
<i>Mining, Class I.,</i>	3 p.m., Mon., Wed., . . .	. 2 2	Mr. Charles Latham.
<i>II.,</i>	3 p.m., Tues., Thurs., . . .	. 2 2	
<i>III.,</i>	3 p.m., Fri., . . .	. 1 1	
<i>(for Evening Classes, see p. 105).</i>			
<i>Mine Management, Class I.,</i>	7.30 p.m., Mon., . . .	. 1 1	
<i>II.,</i>	7.30 p.m., Wed., . . .	. 1 1	
<i>Naval Architecture and Mar-</i>	12 noon, Mon., Wed., Fri.,	. 3 3	PROF. BILES.
<i>ine Engineering, Junior,</i>	. . .	. . .	
<i>Senior,</i>	11 a.m., Mon., Tu., Th.,	. 3 3	
<i>Practical, Junior,</i>	2 to 5 p.m., Tu., Wed.,		
	Th., and Fri., . . .	. 3 3	
<i>Senior,</i>	2 to 5 p.m., Tu., Wed.,		
	Th., and Fri., . . .	. 3 3	

<sup>1</sup> Half-day attendance.<sup>2</sup> Fee for a second or subsequent session, £3 3s.<sup>3</sup> Students who have taken two winters and two summers of Practical Anatomy, as well as the Junior and Senior Lecture courses, may afterwards enrol in Practical Anatomy at £1 1s.<sup>4</sup> Students who have attended Lectures or Laboratory Classes in Botany and paid fees amounting to at least £13 13s., in respect of such classes, may afterwards enrol in any lecture or Laboratory Class in Botany for £1 1s.<sup>5</sup> Fee for Students who have already attended the Geology Class in the University, £2 2s.

## III.—MEDICINE.

THURSDAY, 17TH OCTOBER, 1907.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
Zoology, Elementary, . . . . .	9 a.m., . . . . .	£4 4 <sup>1</sup>	} PROF. KERR.
Zoological Laboratory, Elementary, . . . . .	11 a.m. or 3 p.m., . . . . .	3 3	
Chemistry, . . . . .	10 a.m., . . . . .	4 4 <sup>1</sup>	} PROF. FERGUSON.
Chemical Laboratory, . . . . .	10 a.m. to 4 p.m., . . . . .	10 10	
(Half Session), . . . . .		5 5	
Organic Chemistry (Elem.), (see p. 112), . . . . .		1 1	Dr. T. S. Patterson.
Anatomy, Junior, . . . . .	11 a.m., . . . . .	4 4 <sup>1</sup>	} PROF. CLELAND and
Senior, . . . . .	1 p.m., . . . . .	4 4 <sup>1</sup>	
Practical Anatomy, . . . . .	9 a.m. to 4.45 p.m., . . . . .	3 3 <sup>2</sup>	} Demonstrators.
Physiology, . . . . .	12 noon, . . . . .	4 4 <sup>1</sup>	
Physiological Laboratory, . . . . .	(see p. 116), . . . . .	10 10	} PROF. NOËL PATON and
(Half Session), . . . . .		5 5	
Physiological Chemistry, . . . . .		2 2	Dr. E. P. Cathcart.
Materia Medica and Therap., . . . . .	11 a.m., . . . . .	4 4 <sup>1</sup>	PROF. STOCKMAN.
Pathology, Systematic, . . . . .	3 p.m., . . . . .	4 4 <sup>1</sup>	} PROF. MUIR.
Demonstrations only, Tues., Fri., . . . . .		1 1	
Surgery, . . . . .	12 noon, . . . . .	4 4 <sup>1</sup>	PROF. SIR WM. MACEWEN.
Midwifery, . . . . .	2 p.m., . . . . .	4 4 <sup>1</sup>	PROF. M. CAMERON.
Practice of Medicine, . . . . .	11 a.m., . . . . .	4 4 <sup>1</sup>	PROF. SIR T. M. ANDERSON.
Clinical Medicine, . . . . .	9 a.m., . . . . .	3 3	} PROF. GEMMELL and PROF.
Clinical Surgery, . . . . .	9.15 a.m., . . . . .	3 3	} SIR T. M. ANDERSON.
Public Health, . . . . .	12 noon, four days		} PROF. SIR H. C. CAMERON
	weekly, . . . . .	4 4 <sup>1</sup>	
Public Health Laboratory, . . . . .	10 a.m. to 4 p.m., . . . . .	12 12	} and Assistant.
(Half Session), . . . . .		6 6	
Ear, . . . . .	4 p.m. (see p. 129), . . . . .	1 1	Dr. Thomas Barr.
Throat and Nose, . . . . .	{ 4 p.m., Th. (University), 4 p.m., Tues. or Fri. (Western Infirmary), }	1 1	J. Walker Downie, M.B.

## IV.—LAW.

THURSDAY, 17TH OCTOBER, 1907.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Scots Law,</i> . . . . .	8 a.m., . . . . .	£4 4 <sup>1</sup>	PROF. GLOAG.
<i>Civil Law,</i> . . . . .	5.30 p.m., . . . . .	4 4 <sup>1</sup>	Mr. J. M. Irvine.
<i>Conveyancing,</i> . . . . .	8 a.m., . . . . .	4 4 <sup>1</sup>	PROF. MOIR.
<i>Constitutional Law and History,</i> . . . . .	} 4.30 p.m., . . . . .	4 4 <sup>1</sup>	} Dr. W. S. McKechnie.
(Half Course), . . . . .			
<i>Mercantile Law,</i> . . . . .	5.30 p.m., . . . . .	4 4 <sup>1</sup>	} Mr. William Shaw.
(Half Course), . . . . .		3 3	
<i>Public International Law,</i> . . . . .	5.30 p.m., Mon.,		} Mr. A. H. Charteris.
	Wed., Fri., . . . . .	3 3	
<i>International Private Law</i> (in Summer), . . . . .			} Mr. Jas. A. M'Callum.
<i>Jurisprudence, General or Comparative,</i> . . . . .	4.30 p.m., Mon.,		
	Wed., Fri., . . . . .	3 3	
<i>Political Economy,</i> . . . . .	2 p.m., . . . . .	4 4 <sup>1</sup>	PROF. SMART.
<i>Forensic Medicine,</i> . . . . .	9 a.m. (Jan.), . . . . .	4 4 <sup>1</sup>	PROF. GLAISTER.

<sup>1</sup> Fee for a Second or subsequent Session, £3 3s.<sup>2</sup> Students who have taken two winters and two summers of Practical Anatomy, as well as the Junior and Senior Lecture courses, may afterwards enrol in Practical Anatomy at £1 1s.

## V.—THEOLOGY.

THURSDAY, 17TH OCTOBER, 1907.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Divinity, Senior,</i>	11 a.m.,	£3 3	} PROF. REID.
<i>Junior,</i>	12 noon,	3 3	
<i>Hebrew, Junior,</i>	10 a.m.,	3 3	
<i>Senior, 9 a.m. daily, and 12 noon. Tu., Wed., Th.,</i>		3 3	} — — —
<i>Arabic or Syriac,</i>	(see p. 148),	2 2½	
<i>Ecclesiastical History, Junior, 11 a.m.,</i>		3 3	} PROF. COOPER.
<i>Senior, 12 noon,</i>		3 3	
<i>Biblical Criticism,</i>	10 a.m.,	3 3	} PROF. STEWART.
<i>New Testament Greek,</i>	9 a.m., Mon., Wed., Fri.,	2 2	

## SUMMER SESSION 1908.

## I.—ARTS.

WEDNESDAY, 22ND APRIL, 1908.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Natural Philosophy, Hon.,</i>	10 a.m.,	£2 2½	} PROF. GRAY.
<i>Physical Laboratory,</i>	10 a.m. to 4 p.m.,	4 4	
<i>Chemical Laboratory,</i>	10 a.m. to 4 p.m.,	5 5	} PROF. FERGUSON.
<i>Botanical Laboratory,</i>	9 a.m. to 4 p.m.,	3 3½	
<i>Botany,</i>	(Arts half-course)	4 4½	} Dr. Lang.
<i>Latin,</i>	10 a.m.,	2 2	
<i>Greek,</i>	8 a.m.,	2 2	} Mr. W. Rennie.
<i>Mathematics,</i>	9 a.m.,	2 2	
<i>Hebrew,</i>	9 a.m.,	2 2	} Mr. D. K. Picken.
<i>Arabic,</i>	(see p. 148),	2 2	
			} Mr. R. J. T. Bell.

II.—SCIENCE.<sup>5</sup>

WEDNESDAY, 22ND APRIL, 1908.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Zoology, Advanced,</i>	9 a.m.,	£3 3	} PROF. KERR.
<i>Botany, Elementary,</i>	8 a.m. (see p. 108),	4 4½	
<i>Botany, Advanced,</i>	(see p. 108),	3 3½	} PROF. BOWER.
<i>Botanical Laboratory,</i>	9 a.m. to 4 p.m.,	3 3½	
<i>Physical Laboratory,</i>	10 a.m. to 4 p.m.,	4 4	} PROF. GRAY.
<i>Chemical Laboratory,</i>	10 a.m. to 4 p.m.,	5 5	
<i>Organic Chemistry, Elem.,</i>	(see p. 112),	1 1	} PROF. FERGUSON.
<i>Adr.,</i>	(see p. 94),	3 3	
<i>Metallurgical Chemistry,</i>	12 noon,	2 2	} Dr. T. S. Patterson.
<i>Practical Anatomy,</i>	9 a.m. to 4 p.m.,	2 2½	
<i>Practical Physiology,</i>	9 to 11 a.m.,	4 4½	} Dr. C. E. Fawsitt.
<i>Physiological Laboratory,</i>	10 a.m. to 4 p.m.,	5 5	
<i>Public Health Laboratory,</i>	(see p. 121),	6 6	} PROF. CLELAND and Demonstrators.

<sup>1</sup> For students who are attending, or have attended, the Hebrew Class, the Fee is £1 1s.<sup>2</sup> Fee for a Second or subsequent Session, £3 3s.<sup>3</sup> See fourth note on page 63.<sup>4</sup> Students who have taken two winters and two summers of Practical Anatomy, as well as the Junior and Senior Lecture Courses, may afterwards enrol in Practical Anatomy at £1 1s.<sup>5</sup> See sixth note on page 62.<sup>6</sup> Qualifying half course in Honours, if complemented by attendance on latter half of Class A of Winter Session immediately preceding or succeeding, and if Student has attended intermediate Honours Mathematics before entering Hon. Nat. Phil.<sup>7</sup> For students who have already attended a class of Practical Physiology the fee for each or any of the three sections is £1 1s.

## III.—MEDICINE.

WEDNESDAY, 22ND APRIL, 1908.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Physics,</i>	11 a.m.,	£3 3	Mr. G. W. Walker.
<i>Practical Physics,</i>	9 a.m. to 11 a.m. or 1 p.m. to 3 p.m. (see p. 89),	2 2	PROF. GRAY.
<i>Botany,</i>	8 a.m. (see p. 108),	4 4 <sup>1</sup>	PROF. BOWER.
<i>Botanical Laboratory,</i>	9 a.m. to 4 p.m.,	3 3 <sup>2</sup>	
<i>Clinical Medicine,</i>	9 a.m.,	2 2	PROF. GEMMELL and PROF. SIR T. M. ANDERSON. PROF. SIR H. C. CAMERON and PROF. SIR WILLIAM MACEWEN.
<i>Clinical Surgery,</i>	9.15 a.m.,	2 2	
<i>Chemical Laboratory,</i>	10 a.m. to 4 p.m.,	5 5	
<i>Organic Chemistry, Elem.,</i>	(see p. 112),	1 1	PROF. FERGUSON.
<i>Practical Anatomy,</i>	9 a.m. to 4 p.m.,	2 2 <sup>3</sup>	PROF. T. S. PATTERSON.
<i>Embryology,</i>	11 a.m. (see p. 114),	2 2	PROF. CLELAND and Demonstrators.
<i>Embryological Laboratory,</i>	9 a.m. to 4 p.m. (see p. 114),	3 3	
<i>Practical Anatomy and Embryology,</i>	if taken together,	3 3	Dr. J. F. Gemmill.
<i>Applied Anatomy,</i>	1 p.m., Mon., Wed., Fri.,	2 2	
<i>Practical Pharmacy,</i>	12 noon,	3 3	Dr. Robert Kennedy.
<i>Practical Physiology,</i>	9—11 a.m.,	4 4 <sup>5</sup>	PROF. STOCKMAN.
<i>Physiological Laboratory,</i>	(see p. 116),	5 5	
<i>Medical Jurisprudence and Public Health,</i>	11 a.m.,	4 4 <sup>1</sup>	PROF. NOËL PATON and Muirhead Demonstrator.
<i>Public Health Laboratory,</i>	(see p. 121),	6 6	
<i>Practical Pathology,</i>	1 to 3 p.m. (see p. 119),	3 3	PROF. GLAISTER.
<i>Operative Surgery,</i>	{ 12 noon, with practical work at other hours as may be arranged,	3 3	PROF. SIR WM. MACEWEN.
<i>Diseases of Women,</i>	2 p.m., Tu., Th., Fri.,	2 2	
<i>Insanity,</i>	{ 12 noon, Wed. (University), 10 a.m. Sat. (Gartnavel),	2 2	PROF. M. CAMERON.
<i>Ear,</i>	4 p.m., (see p. 129),	1 1	
<i>Throat and Nose,</i>	{ 4 p.m., Th. (University), 4 p.m., Tues. or Friday. (Western Infirmary),	1 1	L. R. Oswald, M.B.
			Dr. Thomas Barr.
			J. Walker Downie, M.B.

## IV.—LAW.

WEDNESDAY, 22ND APRIL, 1908.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Evidence and Procedure,</i>	8.45 a.m.,	£3 3	Mr. R. Lamond.
<i>International Private Law,</i>	8.45 a.m.,	3 3	Mr. A. H. Charteris.

<sup>1</sup> Fee for a Second or subsequent Session, £3 3s.<sup>2</sup> See fourth note on page 63.<sup>3</sup> Students who have taken two winters and two summers of Practical Anatomy, as well as the Junior and Senior Lecture courses, may afterwards enrol in Practical Anatomy at £1 1s.<sup>4</sup> After first Lecture, the Class will meet in divisions.<sup>5</sup> See seventh note on preceding page.



In addition to the University Courses, the following Hospitals and Dispensaries afford ample means for Practical Instruction in the various departments of Medicine and Surgery :—

**WESTERN INFIRMARY.**—This Hospital contains 416 beds for medical and surgical patients, including Wards for Skin Diseases, and two for diseases peculiar to females. *Physicians*—Prof. Sir Thomas McCall Anderson, M.D. ; Prof. Samson Gemmell, M.D. ; Prof. Ralph Stockman, M.D. ; J. Lindsay Steven, M.D. ; *Honorary Consulting Physician*—Gavin P. Tennent, M.D. *Physicians for Diseases of Women*—W. L. Reid, M.D. ; Professor Murdoch Cameron, M.D. *Assistant Physicians*—John Alexander, M.D. ; William G. Dun, M.D. ; R. B. Ness, M.B. ; William MacLennan, M.B., C.M. *Surgeons*—Professor Sir Hector C. Cameron, M.D. ; Professor Sir William Macewen, M.D., LL.D., F.R.S. ; J. C. Renton, M.D. ; George T. Beatson, M.D., C.B. ; T. K. Dalziel, M.B. ; James H. Nicoll, M.B. *Honorary Consulting Surgeon*—Alexander Patterson, M.D. *Honorary Consulting Ophthalmic Surgeon*—T. Reid, M.D., LL.D. *Assistant Surgeons*—Duncan Macartney, M.D. ; Robert Kennedy, M.A., D.Sc., M.D. ; Alfred A. Young, M.A., M.B. ; George Burnside Buchanan, B.A. (Cantab.), M.B., C.M. ; John Morton, M.B. ; Geo. H. Edington, M.D. *Dispensary Physicians*—James Carslaw, M.A., M.B., C.M. ; John S. McKendrick, M.D. ; Robert Fullarton, M.A., M.B., Ch.B. ; James C. McClure, M.B., C.M. ; Francis J. Charteris, M.B., Ch.B. ; Alexander B. Sloan, M.D., Ch.B. *Extra Dispensary Physicians*—John Gracie, M.B., Ch.B. ; Leonard Findlay, M.D. ; John P. Duncan, B.Sc., M.B., Ch.B. ; M. R. Taylor, M.B., Ch.B. *Dispensary Physicians for Diseases of Women*—J. M. Munro Kerr, M.B. ; E. H. Lawrence Oliphant, M.D. *Dispensary Surgeons*—Farquhar Macrae, M.B., C.M. ; Alexander MacLennan, M.B., C.M. ; Archibald Young, B.Sc., M.B., C.M. ; M. Logan Taylor, M.B., Ch.B. ; W. W. Christie, M.D., C.M. ; C. C. Cuthbert, M.A., M.D., Ch.B. *Extra Dispensary Surgeons*—A. H. Edwards, M.B., C.M. ; David Dickie, M.B., Ch.B. ; Robert B. Carslaw, M.A., M.B., Ch.B. ; John S. Barr, M.B., Ch.B. *Extra Dispensary Physicians for Diseases of Women*—G. N. Turner, M.B. ; S. J. Cameron, M.B., Ch.B. *Dispensary Surgeon for Diseases of the Ear*—Thomas Barr, M.D. *Dispensary Surgeon for Diseases of the Throat and Nose*—J. Walker Downie, M.B. *Surgeon Dentist*—W. D.

Woodburn, L.D.S. *Pathologist*—Professor Robert Muir, M.D. *Assistant Pathologists*—J. H. Teacher, M.D., and M. Logan Taylor, M.B., Ch.B. *Vaccinator*—John W. Nicol, M.B. *Medical Superintendent*—Donald J. Mackintosh, M.B., M.V.O. *Matron*—Miss Helen Gregory Smith. *Secretary and Treasurer*—Henry Johnston, 87 Union Street. The hour of visit is 9 A.M. The Dispensary for Out-Patients is open daily at 2 P.M. Vaccination—Mondays and Thursdays at 12 noon. The station is recognized by the Local Government Board. Fee, £1 1s. It is recommended that when practicable students should attend the vaccination course during the winter session.

According to the present arrangement admission to the practice of this Infirmary is subject to the following regulations :—

1. No student shall be permitted to attend the Infirmary without a Ticket duly signed by the Superintendent.

2. The Fees payable shall be as follows :—

(a) Every Student shall pay a fee of £10 10s. for Hospital attendance, and this shall be kept quite separate from the Fees for Clinical Instruction.

(b) Every Student shall pay £3 3s. for each Winter Session and £2 2s. for each Summer Session of Clinical Instruction.

(c) Students who have completed their Clinical Course elsewhere shall be permitted to enter for a six months' course of the *Hospital only*, on payment of a fee of £2 2s.

(d) There shall be two Courses of Clinical instruction, the first extending from the beginning of November to April, and the second from the beginning of May to July.

(e) At the beginning of each Course the Student shall give intimation to the Superintendent of the Clinical Teacher whose course he wishes to attend, by filling up a form which will be supplied on application to the Superintendent.

3. The fees shall be paid to the Superintendent, who shall give each Student a Ticket of Admission to the Lectures of the Physicians or Surgeons he wishes to attend. He shall also hand to each of the Clinical Lecturers a list of the Students who have taken out Tickets for their respective Courses.

OUT-DOOR VISITATION.—Senior Students who have passed their Third Professional Examination are permitted to visit the sick poor in the Anderston district, under the supervision of certain Professors of the University and assistants.

GLASGOW ROYAL INFIRMARY.—Number of beds, 588. Special wards are set aside for the treatment of Venereal Diseases, Diseases of Women, Diseases of the Throat and Nose, and special beds for Diseases of the Ear. *Physicians*—George S. Middleton, M.A., M.D.; Thomas Kirkpatrick Monro, M.A., M.D.; Walter K. Hunter M.D., D.Sc.; John M. Cowan, M.D., D.Sc.; J. B. Mackenzie Anderson, M.A., M.B. *Surgeons*—John Barlow, M.D.; James Alexander Adams, M.D.; David Newman, M.D.; Quintin M'Lennan, M.B.; James Hogarth Pringle, M.B.; Henry Rutherford, M.A., M.B.; Peter Paterson, M.B. *Assistant Physicians*—David M'Crorie, L.R.C.P.; Norman Macnair, B.Sc., M.D.; John Henderson, M.D.; Campbell S. Marshall, M.D.; James Scott, M.A., M.B., Ch.B.; John Thomson Maclachlan, M.D. *Extra Assistant Physicians*—A. W. Harrington, M.D.; Archibald Jubb, M.D. *Assistant Surgeons*—A. N. McGregor, M.D.; John Patrick, M.B.; A. G. Faulds, M.B.; John A. C. Macewen, B.Sc., M.B.; Thomas Kay, M.B.; Robert Ramsey, M.B., Ch.B. *Extra Assistant Surgeons*—James Battersby, F.R.C.S. (Eng.); Donald Duff, F.R.C.S. (Edin.); W. H. Steel, M.B., Ch.B. *Diseases of Women*—J. K. Kelly, M.D. *Consulting Surgeon for Diseases of the Eye*—A. Maitland Ramsay, M.D. *Diseases of the Throat and Nose*—John Macintyre, M.B. *Pathologist and Curator of Museum*—Charles Workman, M.D. *Assistant Pathologist*—Mary B. Hannay, M.B., C.M. *Anaesthetist*—James K. Patrick, M.B., Ch.B. The hour of visit is 9 A.M. The hours at the dispensary for out-patients are as follows:—*Diseases of the Ear*—James Kerr Love, M.D. 3.30 P.M., Tuesday and Friday. *Diseases of the Throat and Nose*—R. Fullerton, M.D. 11 A.M., Tuesday and Friday. *Diseases of the Eye*—J. Rowan, M.B.; and H. W. Thomson, M.D. 11 A.M., Monday, Wednesday, and Friday. *Diseases of the Skin*—Alexander Morton, M.A., M.D. 11 A.M., Monday, Wednesday, and Friday. *Gynaecologists*—G. Balfour Marshall, M.D.; Peter M'Bryde, M.B., C.M. 11.30 A.M., daily. *Diseases of the Teeth*—William Taylor, L.D.S. 3.30 P.M., Monday, Wednesday, and Saturday. *Vaccination*—Hugh H. Borland, M.B., D.P.H., 12 noon, Monday and Thursday. The station is recognised by the Local Government Board.

The Electric Pavilion contains all the most recent apparatus

for the diagnosis and treatment of disease by Electricity. *Consulting Electrician*—John Macintyre, M.B. *Medical Electrician*—James R. Riddell, L.R.C.P. etc. *Assistant Medical Electricians*—Samuel Capie, M.B.; Archibald Jubb, M.D.; Katharine M. Chapman, L.R.C.P. Ed. *Bacteriologist*—David McCrorie, L.R.C.P. *Assistant Bacteriologist*—J. Archibald Campbell, L.R.C.P.S. *Extra Assistant Bacteriologist*—Lizzie T. Fraser, M.D.

Fees, which include Hospital Practice and the Clinical Lectures, for one year £10 10s., six months £6 6s., three months £4 4s. The total fee is £21. Vaccination £1 1s. The whole Vaccination fee and two-thirds of these fees will be paid by the Carnegie Trust for students who fulfil the conditions of the Trust. *Superintendent*—J. Maxtone Thom, M.B., D.P.H. *Matron*—Mrs. Strong. *Secretary*—Henry Lamond, 93 West Regent Street.

EYE INFIRMARY, 174 Berkeley Street and 80 Charlotte Street.—Hour of Visit, 1 P.M. daily. Fee for six months, £1 1s.; for twelve months, £2 2s.

OPHTHALMIC INSTITUTION, 126 West Regent Street.—Hour of Visit, 2 P.M. Fee for a qualifying course, £1 1s.

INSANITY.—During the Summer Session Dr. Oswald gives in the University a Course of Lectures on Insanity at 12 noon on Wednesdays, and Clinical Instruction at the Glasgow Royal Asylum, Gartnavel, at 10 A.M. on Saturdays. Fee for the combined Course, £2 2s.

At Gartloch Asylum, Gartcosh, Senior Medical Students may obtain appointments as Resident Clinical Clerks. These appointments are made in April and October for six months. Board and lodging with railway fare to and from Glasgow are allowed, and Classes can be attended in Glasgow in the earlier part of the day. Application should be made to the Medical Superintendent, W. A. Parker, M.B., considerably in advance.

Clinical Instruction in Fevers is given at the Ruchill Hospital and the Belvidere Hospital. Fee for a course extending over ten weeks, once a week, £1 1s. Apply to Mr. James D. Borthwick, 285 George Street, Glasgow.

There are also Hospitals for Diseases of the Skin and Ear.

## FACULTIES IN THE UNIVERSITY.

The whole classes of the University are arranged in five Faculties—Arts, Science, Medicine, Law, and Divinity.

## I.—FACULTY OF ARTS.

The Faculty of Arts comprehends four Departments of study, viz.:—A. *Language and Literature*, embracing the classes of Humanity, Greek, English, French, German, Italian, Celtic, Hebrew and Semitic Languages; B. *Mental Philosophy*, comprising Logic and Metaphysics, Moral Philosophy, Political Economy, Education, Philosophy of Law; C. *Science*, including Mathematics, Natural Philosophy, Astronomy, Chemistry, Zoology, Botany, Geology; D. *History and Law*, containing History, Constitutional Law and History, Roman Law.

## A. LANGUAGE AND LITERATURE.

## I. HUMANITY.

The original foundation of this Professorship is not extant; but it appears from the records of the College that it must have been instituted previous to the year 1637. The Professor is elected by the University Court.

*Professors from the year 1706.*

1706. Andrew Rosse.	1815. Josiah Walker, M.A.
1735. George Rosse.	1831. William Ramsay, M.A.
1754. George Muirhead.	1863. George G. Ramsay,
1773. Wm. Richardson, M.A.	M.A., LL.D., Litt.D.
1906. JOHN SWINNERTON PHILLIMORE, M.A.	

The Humanity Class consists of two classes—the *Ordinary*, and the *Honours Class*, which latter class all members of the Ordinary Class have the option of attending. Students not requiring a Public Certificate for the Degree or other purpose may attend any class as Private Students. Private Students are students who attend the class without taking part in the class work.

In both classes the students prepare certain work prescribed, and are examined orally every day. In the Honours Class the business is conducted partially by oral examination,

but mainly by Lectures and Prelections delivered by the Professor. *Unseens* are set from time to time, and Latin Verse Composition is taught to those that desire it.

#### ORDINARY CLASS.

The ORDINARY CLASS meets daily at 9 A.M. Special arrangements will be made for the division of the class into sections for the teaching of Latin Prose. All students attending the Ordinary Class have the option also of attending the Honours Class from 1 to 2 P.M.

#### HONOURS CLASS, 1 P.M.

In this class advanced work is read. Special regard is paid to the needs of students preparing for the Honours Degree in Classics, as well as for Classical Scholarships, the Home and Indian Civil Service Examinations, etc.

One subject is usually read and lectured upon on Mondays and Fridays; another on Tuesdays and Thursdays; and Latin Prose is taught to the Honours Section at 11 A.M. on Thursdays. Students are allowed to attend as Private Students, *i.e.* as listeners only, without doing any of the work of the class; but in that case they do not receive tickets qualifying for the Degree.

Honour Students, wishing to do Latin Prose for the Degree or other purposes, may attend for Latin Prose only.

A course of five sessions may embrace Lectures and Prelections on Plautus—Terence—Lucretius—Catullus—Propertius—Virgil—Persius—Statius—Juvenal—Martial—Tacitus—Quintilian—Cicero's Oratorical and Philosophical works, etc.

The subjects read in the Session 1907-8 will be as follows:—

1. HONOURS CLASS, AT 1 P.M.—Plautus, *Captivi*; Ovid, *Heroides*; Quintilian, *Instit. Orat. I.*

2. ORDINARY CLASS, AT 9 A.M.—Terence, *Andria*; Cicero, *Orationes Caesarianae*; Virgil, *Georg. IV.*; Selections from Martial; Antiquities, and Prosody; How and Leigh's *History of Rome*.

#### II. GREEK.

This Professorship was founded by the College in or about the year 1581. The Professor is elected by the University Court.

*Professors from the year 1704.*

1704. A. Dunlop, LL.D.	1838. Edmund L. Lushington, LL.D.
1746. James Moor, LL.D.	1875. R. C. Jebb, D.C.L., Litt.D.,
1774. John Young, M.A.	LL.D.
1821. Sir Daniel K. Sand-	1889. G. G. A. Murray, M.A., LL.D.
ford, M.A.	1899. John S. Phillimore, M.A.
1906. GILBERT A. DAVIES, M.A.	

The Greek Class consists of two divisions, the Ordinary and the Honours. Students not requiring a Public Certificate may attend as Private Students, *i.e.* without doing the work of the class.

All students should possess the following books:—*Ancient Atlas*; *Greek Lexicon*, Liddell & Scott (large or intermediate edition—the small edition is not sufficient); some History or Primer of Greek Literature; *Greek Grammar*, Goodwin.

Senior students are recommended to get Gow's *Companion to the School Classics*, and Seyffert's *Dictionary of Classical Antiquities*, *etc.*, translated by Nettleship and Sandys; or, in place of Seyffert, Smith's two small volumes, the *Classical Dictionary* and the *Dictionary of Antiquities*.

## ORDINARY CLASS.

This is the ordinary qualifying class for graduation; all members of it must have passed the Preliminary Examination in Greek on the higher standard, or an equivalent examination.

All students requiring a certificate of attendance must duly perform the work of the class; but those who do not require a certificate, or those who have not passed the Preliminary Examination, may attend as Private Students, *i.e.* without doing the work.

The class meets at 8 A.M. every week-day except Saturday.

The class hour is chiefly occupied by the Professor's lectures, but the class is liable to be examined orally or on paper every day. The work done includes the reading of Greek Authors; Greek Prose Composition; Written Exercises in translation; Greek History, Language, Antiquities, and Literature.

Women students have the option of attending this class.

## HONOURS CLASS.

The Honours Class meets at 12 noon every week-day except Saturday. Members of the Ordinary Class are at

liberty to attend; they are not recommended to attempt the work of the class except in so far as it suits their convenience. The Class consists of two divisions, viz.: First year's students (*i.e.* those who are seeking the certificate with a view to graduate with Honours, and doing the full work of the class), and Private students who have already been through the class. These may follow the class work, but arrangements will be made for more advanced teaching for them, either individually or in small voluntary groups.

The work is similar to that done in the Ordinary Class, but more advanced, greater attention being given to the History of Literature, Philology, Criticism, and Philosophy.

*Subjects for Session 1907-8.*

ORDINARY CLASS.—Plato, *Protagoras*; Aeschylus, *Persae*; Isocrates, *Panegyricus*. Greek Grammar and Literature; Written Translations and Prose Composition.

HONOURS CLASS.—For the lectures in this class the student should have read the books beforehand.

Subjects: Hesiod, *Works and Days*; Thucydides I.; Pindar, *Olympians*. Translations, Essays, Prose Composition.

A voluntary class for Greek Verse will be formed.

Written Translations and Prose Composition.

Students will be given Private Hours for Prose.

A Private reading class will be arranged for both First and Second year (voluntary).

### III. ENGLISH LANGUAGE AND LITERATURE.

This Chair was founded by ordinance of the Universities Commission (1858) of date 25th November, 1861, and is in the gift of the Crown.

*Professors.*

1862. John Nichol, LL.D.

1889. Andrew Cecil Bradley, M.A., LL.D.

1900. W. A. Raleigh, M.A.

1904. W. MACNEILE DIXON, M.A., Litt.D.

N.B.—*Students are strongly advised to take the English Literature Class, as has hitherto been the custom, in the later part of their Course. Those who, for special reasons, desire to take it early should consult the Professor before taking out their class-tickets.*



ORDINARY CLASS.—During session 1907-8 the class will meet daily, except on Saturday, at 11 A.M.

Lectures will be given on Mondays, Tuesdays, Wednesdays, and Thursdays, throughout the session, on the following subjects:—1, Literary Theory; 2, Shakespere; 3, Milton; 4, The Romantic Revival; 5, The History of the English Language.

On Fridays lectures will be given on Renaissance Poetry.

The following texts are prescribed for the Degree Examination:—Chaucer, *Nonne Prestes Tale*; Shakespere, *Macbeth*, *Henry IV.*, Parts I. and II.; Palgrave, *Golden Treasury*, Books I, II., and III.; Ward, *English Poets*, Vol. IV.

Students who have already taken the Ordinary Class are permitted to attend the Lectures on three days a week for a Fee of £2 2s. Such attendance cannot be reckoned towards graduation.

HONOURS CLASS.—The class meets daily at 12 noon; on Monday, Wednesday, and Friday for the study of special authors and of selected subjects connected with the history of English Literature (1350-1900); on Tuesday and Thursday for the study of Anglo-Saxon and Middle English. The special authors to be studied during session 1907-8 are Wordsworth and Burke.

BRITISH HISTORY CLASS FOR HONOURS IN ENGLISH. — See p. 91.

DEGREE EXAMINATIONS.—The subjects for these in October, 1907, and April and October, 1908, will be found on p. 231. Students are advised to present themselves for their examination in the April or October immediately following their attendance of the Ordinary Class, as the subjects studied in class will be changed from year to year.

#### IV. FRENCH LANGUAGE AND LITERATURE.

This Lectureship was instituted by the University in 1895.

##### *Lecturers.*

1895. Alfred Mercier, L. ès L.

1898. CHARLES MARTIN, M.A. (Paris), O.A.

N.B.—Students are advised *not* to take the French Language and Literature Class in the first year of their University course. Their work will be more thorough if it is done on a good English and classical foundation.

I. ORDINARY CLASS.—The French Ordinary Class meets daily at 11 A.M. The class is conducted in French, but will be partly conducted in English, during the first weeks of the session, if found necessary.

The work of the class will comprise the following subjects :

A. *Literature*.—1. La comédie avant Molière et la comédie de Molière. 2. Victor Hugo, poète. 3. Michelet. 4. Leçons sur l'histoire générale de la littérature française au xix<sup>e</sup> siècle.

Molière: *Les Précieuses ridicules*, *Les Femmes savantes*, *Le Tartufe*, *Le Misanthrope* (Edition Hachette or The Temple Molière (Dent) of the separate plays). *Extraits de Victor Hugo* (Delagrave). Michelet: *Notre France*. Faguet: *Etudes littéraires du xix<sup>e</sup> siècle*.

B. *Language*.—Translations into and from French and French essays will be corrected. Lectures on French Composition.

History of the French Language; Morphology and Syntax of the French Tongue [Text-book: Darmesteter, *Grammaire historique de la langue française*, Parts II. and IV.].

A tutorial class meets for the study of pronunciation and the correction of exercises.

A class library, well provided with books of reference, is open to the students from 9 A.M. till 5 P.M.

Students who take French for purposes of graduation must attend both classes; but students who do not intend to graduate may take the Language class alone or the Literature class alone. The fee for one class alone is £2 2s.

II. HONOURS CLASS.—This Class will meet three or four times a week at 12 noon.

A. Les origines du romantisme et le théâtre romantique français.

B. La poésie romantique.

C. Diderot. Les auteurs comiques du xviii<sup>e</sup> siècle: Le Sage et Marivaux.

D. Lecture avec commentaires philologiques et littéraires des ouvrages suivants: (1) Gaston Paris, *Extraits de la Chanson de Roland et Chrestomathie du Moyen-Age*; (2) *Extraits des Chroniqueurs français* (Edition Gaston, Paris—Hachette); (3) Pelissier, *Extraits des Poètes français du xvi<sup>e</sup> siècle*.

E. Exposé de quelques questions de grammaire historique (Text-Books: A. Darmesteter, *Grammaire historique de la Langue française*; Bréal, *Essai de Sémantique*).

F. Travaux pratiques: leçons faites par les Etudiants, discussion de travaux écrits.

Traductions et Compositions françaises.

## V. GERMAN LANGUAGE AND LITERATURE.

This Lectureship was instituted by the University in 1899.

### Lecturers.

1899. Alexander Tille, Ph.D.

1900. GEORGE P. THISTLETHWAITE, B.A., Ph.D.

I. ORDINARY CLASS.—The German Ordinary Class meets daily at 10 a.m. in the Conveyancing Class Room, and the course, which extends to one hundred meetings, qualifies for graduation in Arts. Students who do not intend to graduate may take either the Literature class or the Language class alone. Part of the work will be done in German, as soon as the students are sufficiently advanced for it. The fee for one class is £2 2s.

A. *Language*.—Mondays, Wednesdays, and Fridays. Lectures on Higher Modern Grammar, on the pronunciation, and on the history of the language. 2. Translation of parts of the following works: Fulda, *Die wilde Jagd* (Reclam edition); Schiller, *Wilhelm Tell*, *Wallensteins Lager* and *Die Piccolomini* (Pitt Press); Heine, *Harzreise* (Buchheim's edition, Clarendon Press); Kohlrausch, *Das Jahr 1813* (Pitt Press); Selections from a sixteenth century Text. German essays, Prose Composition: translation at sight into German. Text-books: Brandt, *Grammar of the German Language*; Buchheim, *Materials for German Prose Composition* (large edition).

B. *Literature*.—Tuesdays and Thursdays. General outlines: chief classical period to the death of Schiller. Text-book: Kluge, *Geschichte der deutschen National-Litteratur*.

*Women students have the option of attending this Class.*

TUTORIAL CLASSES.—The students are divided into small groups, which meet once a week for the practice of conversation

and pronunciation, and for the correction of exercises. A voluntary class will also be formed which will have in view the aims of those students who intend to become teachers of German: in this class the students will be afforded opportunities of familiarising themselves with the direct method of teaching modern languages.

II. HONOURS CLASS.—This class will meet on Mondays, Thursdays, and alternate Wednesdays at 12.30 p.m.

*Literature*: From Luther to Lessing. Historical Grammar and Middle High German Grammar. Interpretation of parts of Middle High German Texts: *Iwein* and *Das Nibelungenlied*; (edition) *Deutsche Classiker des Mittelalters*, Brockhaus, Leipzig. Interpretation of *Faust* and selections from 16th century Texts. German Essays and Prose Composition. Text-books: Kluge, *Geschichte der deutschen National-Litteratur*; Scherer, *Geschichte der deutschen Literatur*; Paul, *Mittelhochdeutsche Grammatik*; Wright, *Middle High German Grammar*; Sahr, *Hans Sachs und Johann Fischart*; Behagel, *Historical Grammar of the German Language*; *Faust* (Part I.), edited by Thomas (Heath & Co.), or Lee (Macmillan).

A Tutorial Class will meet for the practice of conversation and the correction of exercises. Classes will be formed again, if possible, for reading purposes.

## VI. ITALIAN LANGUAGE AND LITERATURE.

This Lectureship was instituted by the University Court in 1902.

*Lecturer*—SIGNOR FERNANDO AGNOLETTI, D. Litt.

An Italian Elementary Class will meet twice weekly, if possible at an hour to suit the convenience of students. It will deal chiefly with exercises on Language, and will close with a short sketch of Italian Literature. Modern Italian prose and easy poetry will be read. Text-books: Collodi, Pinocchio; S. Ferrari, *Antologia della poesia italiana*.

ORDINARY CLASS.—This Class will meet daily at an hour to be fixed in agreement with the students.

*Language.* Short epitome of Italian Grammar. Translations. Prose compositions. Fonologia. Reading of modern prose and poetry. Ritmica e metrica.

*Literature.* Early verse and prose fiction. The Novella from Boccaccio to Bandello (XIV.—XVI. cent.). Outline of the history of fiction from Bandello to Ugo Foscolo (XVI.—XVIII. cent.). Manzoni. Lyrical poets of the Dante circle; Lyrical poets of the Nineteenth Century.

Text-books: for Language: Goldoni, *La Locandiera*; Leopardi, *Opere*; Pascoli, *Myricae*. For Literature: Boccaccio, *Decamerone*; Manzoni, *I promessi sposi* (edizioni posteriori al 1840); Carducci, *Discorsi letterari e storici*.

Students may attend either one or both.

HONOURS CLASS.—This class will meet on Tuesdays and Thursdays, and on the first ten Mondays of the Session, at an hour to be fixed in agreement with the students.

Dante: *Vita Nuova*, *Paradiso*. Poetry and cortesia in the XV., XVI. centuries. Machiavelli. Outline of the history of the Language. Text-books: Gorra, *Morfologia italiana*. *La Vita Nuova* (Passerini, Firenze). *La Divina Commedia* (Casini, Firenze). *Il Principe* (Lisio, Firenze).

Passages will be read from the works of Lorenzo dei Medici, Leonardo, Ariosto, Castiglione.

The classes are open to both men and women.

## VII. HEBREW.

(See under Faculty of Theology, p. 147.)

## VIII. ARABIC.

(See under Faculty of Theology, p. 148.)

## IX. CELTIC.

The late Rev. Archibald Kelly M<sup>c</sup>Callum, LL.D., by his holograph will, dated 8th March, 1881, to which were attached three codicils (the last dated 27th January, 1892), directed his Trustees, among other purposes, to devote an annual sum to a Lectureship, or a course of not fewer than fifteen Lectures, on

Celtic Literature. He left detailed directions as to certain subjects which were to be among those discussed. The Lecturer was to be appointed by the University Court for a period of three years, and was to be eligible for re-election after a subsequent appointment for three years had been made. Matriculated students and others might attend the Lectures. Dr. McCallum also directed that his library should be handed over to the University as a nucleus for a Celtic Library for the use of the Lecturers and such students as might attend the Lectures, and any others interested in Celtic Literature. The Library was to be kept separate and designated "The Celtic Lectureship Library," and the sum of £10 to be annually expended in making additions thereto.

*Lecturers*—1900. Professor Magnus Maclean, D.Sc.

1903. Professor Kuno Meyer, Ph.D.

This lectureship was placed on a new footing by a Provisional Order made by His Majesty's Secretary for Scotland under the provisions of the Private Legislation Procedure (Scotland) Act, 1899, and confirmed by Parliament on 4th August, 1905, by the Glasgow University Order Confirmation Act, 1905.

*Lecturer*—1906. GEORGE HENDERSON, Ph.D.

The course now qualifies for graduation in Arts. Any student who attends with a view to this must previously have passed a Preliminary Examination in Scottish or Irish Gaelic, or in Welsh, including translations from and into English, with grammatical, literary, and philological questions.

The course for 1907-1908 will embrace:—

*A. Language.* The Principles of Celtic Philology, Phonology, Grammar of the Gaelic Language; Introduction to Old Irish, Windisch's Irish Grammar (trans. by Moore); Strachan's *Paradigms and Selections from the Old Irish Glosses*.

*B. Literature.* Windisch's *Irische Texte mit Wörterbuch*. *Togail Brádaire Da Derga*, ed. Whitley Stokes; Meyer's *Early Irish Texts*; *Leigheas Cois' O'Cein* (ed. Henderson). The Death-Tales of the Ulster Heroes, by Kuno Meyer (Todd Lecture Series, Royal Irish Academy). The Poems of Alexander Macdonald of Ardnamurchan. Selections from the standard literature of the modern period of Scottish Gaelic.

*C. Palaeography.* Readings from Facsimiles of Old Gaelic Texts. The class meets daily at 4 p.m.

## B. MENTAL PHILOSOPHY.

### I. LOGIC AND RHETORIC.

This Professorship is one of those founded in the charter of *Nova Erectio* in 1577. The Professor is elected by the University Court.

*Professors from the year 1727.*

1727. John Loudon.	1827 <sup>2</sup> . Robert Buchanan, LL.D.
1751. Adam Smith, LL.D.	1864. John Veitch, LL.D.
1752. James Clow.	1895. Robert Adamson, LL.D.
1787 <sup>1</sup> . George Jardine, M.A.	1902. ROBERT LATTÀ, D.Phil.

The Logic Class meets daily, on five days of the week, from 9 to 10 A.M.

The Course of Lectures includes the following subjects:—

I. LOGIC.—The Principles of Deductive and Inductive Logic. Special reference will be made to Mill's *Logic*, Books I., II., and III.

II. PSYCHOLOGY.—A general account of the composition and development of Mind, with a more detailed consideration of the process of knowledge.

III. METAPHYSICS.—An introduction, historical and critical, to the general questions of Modern Philosophy. The historical reference will concern mainly the doctrines of Descartes, Locke, Berkeley, and Hume.

Students before entering the class are recommended to read some elementary work on Formal Logic, such as Jevons' *Elementary Lessons in Logic*, Fowler's *Deductive Logic*, or Mellone's *Introductory Text-book of Logic*, and also some elementary book on Psychology, such as Stout's *Groundwork of Psychology*.

An advanced class is held in which lectures are given on some of the subjects prescribed for Honours in Mental Philosophy. During next session this class will meet at 11 A.M., on three or four days weekly.

Students before entering the honours class are recommended to read (1) the sections on pre-Kantian philosophy in any history of Modern Philosophy, e.g. Höffding, Falckenberg, Erdmann, or Adamson, and (2) Some history of Greek Philosophy (period before Plato), as Zeller, Burnet, Erdmann, or Gomperz. Janet and Séaille's *History of the Problems of Philosophy* should also be consulted.

<sup>1</sup> Mr. Jardine was assistant and successor to Mr. Clow from 2nd June, 1774.

<sup>2</sup> Mr. Buchanan was assistant and successor to Mr. Jardine from 1st October, 1824.

## II. MORAL PHILOSOPHY.

This Professorship was founded by the charter of *Nova Erectio* in 1577. The Professor is elected by the University Court.

*Professors from the year 1727.*

1727. Gerschom Carmichael.	1796 <sup>1</sup> . Archd. Arthur, M.A.
1730. F. Hutcheson, LL.D.	1797. James Mylne, M.A.
1746. Thomas Craigie.	1839. William Fleming, D.D.
1752. Adam Smith, LL.D.	1866. Edward Caird, D.C.L.,
1764. Thomas Reid, D.D.	LL.D.
1894. HENRY JONES, LL.D., F.B.A.	

*N.B.*—No student, who is proceeding to a degree, shall be allowed to attend the class of Moral Philosophy during the first session of his or her course, except by the express permission of the Professor.

The Moral Philosophy Class meets at 8 A.M. on five days of the week.

In this class Moral Philosophy is treated both historically and systematically. In connection with the systematic part of the course lectures are given on the metaphysical and psychological implications of Morals, and in connection with the historical part the development of Morals is traced, and an account given of some of the main ethical theories of ancient and modern times.

The work of the class will further comprise the study of Plato's *Republic* (translation by Davies and Vaughan), and students are recommended to read in conjunction therewith Bosanquet's *Companion to Plato's Republic*, or Nettleship's *Philosophical Lectures and Remains*, Vol. II.

In the Higher Moral Philosophy Class the Professor will lecture on some of the subjects prescribed for the Degree with Honours; and, in connection therewith, will deliver a part of the course of Lectures of the Political Philosophy Class.

During next session this class will meet at 12 noon on Mondays, Tuesdays, and Wednesdays.

## POLITICAL PHILOSOPHY.

*Lecturer*—ROBERT A. DUFF, D.Phil.

In the Political Philosophy Class a full course of 50 Lectures will be delivered during the Winter Session. It is intended

<sup>1</sup> Mr. Arthur was assistant and successor to Dr. Reid from 22nd May, 1780.



to meet the requirements, in this subject, of students preparing for the Degree of M.A. with Honours in *Mental Philosophy*, or in *Economic Science*, and for the Examinations of the Civil Service in Political Science.

The Course of Lectures will include a discussion of the main theories as to the nature and functions of the State; a critical account of the growth of social institutions; and an analysis of the moral principles underlying political rights and obligations. In different years such problems as The History of the Poor Law, The Methods of Charitable Relief, Criminology and the theory of Punishment, Local and Imperial Government, and Methods of Social Regeneration and Progress will also be dealt with.

Students will be expected to pursue during the Session a course of reading in prescribed portions of books dealing with the subjects treated of in the Lectures, and, in particular, to acquire an accurate knowledge of Aristotle's *Politics*, Burke's *Reflections on the French Revolution*, Green's *Principles of Political Obligation*, and Sidgwick's *Elements of Politics*.

In addition to this Winter Class, Lectures may be delivered during the Summer Session, should there be sufficient demand for them. During next Winter the Class will meet at 12 o'clock on Thursdays and Fridays, and at 11 o'clock on Wednesdays.

### III. POLITICAL ECONOMY.

This Chair (called the Adam Smith Chair of Political Economy) was founded by Ordinance No. 149 of the Universities Commission (1889) of date 25th February, 1896, with an endowment of fifteen thousand pounds sterling, given by Mr. Andrew Stewart, merchant, Glasgow. The patronage is vested in the University Court, conjointly with one representative from time to time elected by the Merchants' House of the City of Glasgow, one representative from time to time elected by the Trades' House of the City of Glasgow, and one representative from time to time elected by the Chamber of Commerce of the City of Glasgow. The professor is a professor in the Faculties of Arts and Law.

Before the founding of the Chair, Political Economy was attached to the Chair of Moral Philosophy till 1892, when a separate lectureship was instituted by the University.

*Professor.*

1896. WILLIAM SMART, M.A., D.Phil., LL.D.

*Senior Assistant*—THOMAS JONES, M.A.

The Political Economy Ordinary Class meets at 2 P.M.

The Lectures, which are partly doctrinal, partly historical, are intended to accompany the study of prescribed books. After a short introduction dealing with the evolution of industry in England and Scotland, the first part of the course will deal with Demand and Consumption: the Agents of Production—Land, Labour, Capital, and Organization: Theory of the Equilibrium of Demand and Supply: Value, or Distribution and Exchange: Trade Unions. (Text-books: Marshall, *Elements of Economics of Industry*, third edition, 1899; Smart, *The Distribution of Income*.) Thereafter Money, Credit and Banking, and International Trade will be taken up. (Text-books: Gide, *Political Economy*, Book II.; Smart, *The Return to Protection*.) For preparatory reading students are recommended to Gide's *Political Economy* (Isbister, London, or eighth French edition, 1903, Larose, Paris).

HONOURS CLASS. The Class meets at 3 P.M. Subjects: Taxation and Public Finance, with some study of the Theory of the State; Poor Laws. Special study will be made of the activities and finance of municipalities, and of current economic problems as they present themselves.

Students are recommended to confine themselves for preparatory reading to mastering Marshall's *Principles of Economics*, Vol. I., Books V. and VI., fourth edition, 1898.

## IV. EDUCATION.

## THEORY, ART, AND HISTORY OF EDUCATION.

This Lectureship was instituted by the University in 1894.

*Lecturers.*

1894. David Ross, M.A., B.Sc., LL.D.

1899. John Adams, M.A., B.Sc.

1902. John Clark, M.A.

1907. WILLIAM BOYD, M.A., B.Sc.

*N.B.*—Students are strongly advised to take the Education Class not earlier in their course than either the Logic Class or the Moral Philosophy Class.

The Education Class meets daily at 4 P.M. The course consists of one hundred lectures qualifying for graduation in Arts.

A. THEORY.—The nature and limits of Education; its principles; its logical, psychological, and ethical bases.

B. ART.—Communication between minds; method in general and the evolution of modern methods; sequence of studies and their relative values, utilitarian and disciplinary.

C. HISTORY.—Educational systems in general; special study of the periods to which the prescribed text-books refer, and of early Scottish education.

Books for class work and reference.—Bosanquet, *Education of the Young in the Republic of Plato* (Cambridge University Press); Burnet, *Aristotle on Education* (Cambridge University Press); Ascham, *Schoolmaster* (Cassell & Co.), pp. 10-105; Rousseau, *Émile* (International Education Series), Books II., III.; Adams, *Herbartian Psychology applied to Education* (Isbister); Herbert Spencer, *Education* (Watts & Co.).

## V. PHILOSOPHY OF LAW.

(See under Faculty of Law, p. 139.)

## C. SCIENCE.

### I. MATHEMATICS.

This Professorship, long suppressed for want of funds, was revived by an Act of Faculty in 1691. The Professor is appointed by the University Court. He is a member of the Faculty of Arts, and also, since 1893, of the Faculty of Science.

*Professors from the year 1691.*

1691. George Sinclair.	1796 <sup>1</sup> . James Millar, M.A.
1699. Robert Sinclair, M.D.	1832. James Thomson, LL.D.
1711. Robert Simson, M.D.	1849. Hugh Blackburn, LL.D.
1761. James Williamson, D.D.	1879. WILLIAM JACK, LL.D., D.Sc.

### *Ordinary Class.*

Subjects: *Euclid*, Books IV., VI., and XI. 1—21, more advanced *Algebra*, and the Elements of *Transversals* and of *Analytical Geometry of the straight line and circle*, *Trigonometry*, including solution of triangles. Two parallel subdivisions of

<sup>1</sup> Mr. Millar was assistant and successor to Dr. Williamson from 26th Feb., 1789.

the Class meet daily (except on Saturdays), one from 9 to 10, and one from 12 to 1.

*Intermediate Honours Class.*

Subjects: *Plane Trigonometry, Analytical Conics, Differential and Elements of Integral Calculus.* There will be two divisions of the Class, one meeting from 10 to 11, and one meeting from 11 to 12, daily, except on Saturdays.

*Advanced Honours Class.*

Subjects: *Integral Calculus, Spherical Trigonometry, Geometry of Three Dimensions, Differential Equations.* The class meets at 11-12 on Mondays, Wednesdays, and Fridays.

For the "*Lorimer*," the "*Metcalf*," and the "*Muir*" Bursaries in Mathematics, see under Bursaries; and for the *Cunninghame Gold Medal*, see under Prizes.

## II. NATURAL PHILOSOPHY.

This Professorship was founded by the Charter of *Nova Erectio* in 1577; and the Professor was confined to the department of Natural Philosophy in 1727. The Professor is elected by the University Court. He is a member of the Faculty of Arts, and also, since 1893, of the Faculty of Science.

*Professors from the year 1727.*

1727. Robert Dick.

1751. Robert Dick, M.D.	1803. W. Meikleham, LL.D.
1757. John Anderson, M.A.	1846. Lord Kelvin, D.C.L.,
1796. James Brown, LL.D.	LL.D., F.R.S.

1899. ANDREW GRAY, LL.D., F.R.S.

*Lecturers.*

PHYSICS (For Students of Medicine), G. W. Walker, M.A.  
ELECTRICITY—PURE AND APPLIED, James G. Gray, B.Sc.

*Arnott and Thomson Demonstrator.*

James G. Gray, B.Sc.

*University Assistants.*

G. W. Walker, M.A.

J. G. Gray, B.Sc.

G. E. Allan, D.Sc.

R. A. Houstoun, M.A., B.Sc., Ph.D.

**I. ORDINARY CLASS (*Lectures*).**—The Ordinary Natural Philosophy Class meets daily at 9 A.M. The main divisions of the course are Elementary Dynamics and Properties of Matter, Sound, Heat, Light, Magnetism and Electricity. The lectures are fully illustrated by experiments. A detailed programme of the course will be published before the beginning of the session and supplied to students on application at the Physical Laboratory.

*Tutorial Class.*—Students attending the Ordinary Class are recommended also to attend the Tutorial Class, which meets on Tuesdays and Thursdays at 11 A.M. The work done in this class consists largely of numerical and other examples dealing with the subject-matter of the Ordinary Class lectures.

**II. SPECIAL GRADUATING CLASS (*Lectures and Practical Work*).**—This class has been instituted to meet the wants of King's students and others who desire to become Teachers of Physics, or who may wish to obtain a practical training in the use of physical instruments. Five meetings of the class will be held in each week, but at least two of these meetings will be of two hours' duration, and will be devoted to practical work performed in the Physical Laboratory by the students working singly or in pairs. The other meetings of the class will be devoted to Systematic Lectures in which the principles of Natural Philosophy will be explained and illustrated by experiments and examples shown in the Lecture-room.

As far as possible the experiments performed in the practical work of each week will be illustrative of the work done in the Systematic Lectures of that week. Each student will be required to keep a careful record of the practical work done by him: this record must be submitted for inspection by the Degree Examiners.

In addition to examination by written papers each candidate for a degree will, if he has taken this class, undergo an oral examination, which will include questions on the practical use of instruments and methods of experimenting.

Hours, to be arranged.

The Fee charged will be £4 4s. with Two Guineas additional for Practical Work.

**III. HIGHER MATHEMATICAL CLASS, A.**—This class meets three times a week, on Mondays, at 1 P.M., and on Wednesdays and Fridays, at 12 noon, and is suitable for Honours Students

and students who are proceeding to the Degree of B.Sc. in Pure Science.<sup>1</sup>

The work comprises the Mathematical Theories of selected special branches of Natural Philosophy. The subjects treated in next session will be Higher Dynamics, and one or more of the following: Thermodynamics, Electromagnetism, Wave Theory of Light, Conduction of Heat.

IV. HIGHER MATHEMATICAL CLASS, B.—This class deals mainly with Dynamics, which will be treated in such detail and with such reference to practical problems as may render it suitable for Students of Engineering. A knowledge of Elementary Differential and Integral Calculus only will be assumed in this class, and students who desire to join it are strongly advised to begin the study of this branch of mathematics at least in the preceding summer. Professor Gibson's Elementary Treatise on the Calculus will be found useful in connection with this class. The class will meet on Mondays, Tuesdays, and Thursdays at 12 noon throughout the session. Attendance upon it will qualify for the Degree of B.Sc. in Engineering Science.

V. ELECTRICITY PURE AND APPLIED.—This class will meet at 12 noon on Wednesdays and Fridays, during the Winter Session, if a sufficient number of students present themselves. The course is one of the options for the Degree of B.Sc. in Engineering Science.

It is very desirable that students attending this class should either be attending or have already attended a course of Practical Physics in the Physical Laboratory.

VI. PHYSICAL LABORATORY.—Experimental Courses will be given in the Physical Laboratory from 10 to 4 daily throughout the Winter and Summer Sessions.

A. *Ordinary Course*.—This is part of the ordinary qualifying course for the Science Degrees; and in the case of the Degree in Pure Science is part of the course for the *First Science Examination*. It is suitable for ordinary students of Natural

<sup>1</sup> The Course in Natural Philosophy for the *Final Examination* for the Degree of B.Sc. in Pure Science consists of the Higher Mathematical Class (II., A) and the advanced Laboratory Course (B). The practical Course (B) must have been preceded by the Course (A).

Philosophy, and is recommended to all whose arrangements will permit of their taking a laboratory course. Ordinarily it extends over the Winter Session, but attendance may be made up of three months in the Winter Session together with the Summer Session. A student may qualify for the Degree of B.Sc. in Engineering Science by special attendance given in the Summer Session only.

*B. Advanced Course.*—A series of advanced exercises in Heat, Light, and Electricity has been arranged, and will be carried on during the Winter Session.<sup>1</sup>

A syllabus of Courses *A* and *B* may be had on application at the Laboratory; arrangements as to hours of attendance will be made at the beginning of each session.

*C. Medical Course.*—A Special Class for Practical Work in Physics has been arranged for Medical Students. Students attend in two sets: Set I. from 9 to 11 a.m. on Tuesdays and 1 to 3 p.m. on Thursdays, and Set II. from 1 to 3 p.m. on Tuesdays and 9 to 11 a.m. on Thursdays. Fee £2 2s.

*D. Research Work.*—Research work is carried on daily under the superintendence of the Professor, his Official Assistant, and the Arnott and Thomson Demonstrator.

*Research Students in 1906-7.*—George E. Allan, D.Sc.; Alexander D. Ross, M.A.; Robert Jack, M.A., B.Sc.; and William Miller, M.A., B.Sc.

Books recommended: For I. Ordinary Class.—Watson, *Text-Book of Physics*, or Glazebrook, *Cambridge Text-Book of Physics*; and Bottomley's or Knott's *Mathematical Tables*. For reference, Thomson and Tait, *Elements of Natural Philosophy*; Gray, *Treatise on Physics*, Part I. For II. Special Graduating Class.—Watson, *Text-Book of Physics*; Shuster and Lees, *Intermediate Course of Practical Physics*; Maclean, *Exercises in Natural Philosophy*. For III. Higher Mathematical Class (A.).—Gray, *Treatise on Physics*, Part I.; and Treatises recommended in connection with special subjects treated. For IV. Higher Mathematical Class (B.).—Gray, *Treatise on Physics*, Part I. For V. Electricity Pure and Applied—Gray, *Absolute Measurements in Electricity and Magnetism* (smaller treatise); Maclean, *Physical Units*. For VI. Physical

<sup>1</sup> See note on preceding page.

Laboratory.—Stewart and Gee, *Elementary Practical Physics*; Glazebrook and Shaw, *Practical Physics*; Gray, *Absolute Measurements in Electricity and Magnetism* (smaller treatise). For reference, Kohlrausch, *Physical Measurements*; Wiedemann, *Elektricität*; Gray, *Theory and Practice of Absolute Measurements in Electricity and Magnetism*.

## PHYSICS.

*Lecturer*—GEORGE W. WALKER, M.A.

The lectures of this course are designed primarily for students proceeding to the First Professional Examination in Medicine. They are delivered daily at 11 A.M. during the Summer Session in the Natural Philosophy Department, and embrace the fundamental principles of the Dynamics of Solids, Liquids, and Gases, and the rudiments of Sound, Light, Heat, Magnetism, and Electricity. A detailed programme of the subjects of the course, containing the titles of books recommended for use by students and of works which may be consulted, is given to each student at the beginning of the course.

Two written examinations are held during the session, and the Class meets for a tutorial hour weekly in which additional instruction is given by oral examination and by exercises on the previous lectures.

*For the Arnott Prize in General Physics, see Index.*

## ELECTRICITY—PURE AND APPLIED.

*Lecturer*—JAMES G. GRAY, B.Sc.

(See p. 88 above.)

## III. ASTRONOMY.

(See under Faculty of Science, page 93.)

## IV. CHEMISTRY.

(See under Faculty of Medicine, page 110.)

## V. ZOOLOGY.

(See under Faculty of Medicine, page 109.)

## VI. BOTANY.

(See under Faculty of Medicine, page 108.)

## VII. GEOLOGY.

(See under Faculty of Science, page 98.)



## D. HISTORY AND LAW.

## I. HISTORY.

This Chair was founded by Ordinance No. 28 of the Universities Commission (1889) of date 5th June, 1893. The Professor is appointed by the University Court.

*Professors.*

1894. Richard Lodge, M.A.

1899. DUDLEY J. MEDLEY, M.A.

ORDINARY CLASS.—The Class meets daily at 10 A.M., except on Saturdays. The course consists of one hundred lectures qualifying for graduation.

In session 1907-8 the Professor will lecture on the Outlines of European (including British) History, A.D. 476-1453. The prescribed text-book is Bryce, *Holy Roman Empire*. Students are recommended to read in addition *Periods of European History*, vols. I. II. III. (Rivington).

HONOURS CLASS.—This Class meets on Mondays, Wednesdays, and Fridays, at 11 A.M. During session 1907-8 the Professor proposes to lecture on British History, A.D. 1688-1832.

Students who intend to join this class would do well to make themselves thoroughly familiar with the outline of the history of the period. Those who desire to do further preparatory work should consult the Professor by letter.

BRITISH HISTORY CLASS FOR HONOURS IN ENGLISH  
AND IN ECONOMIC SCIENCE.

*Lecturer*—KENNETH K. M. LEYS, B.A.

This Class meets on Mondays, Wednesdays, and Fridays, at 10 A.M.; and is more particularly concerned with the periods of British History prescribed for Honours in English.

During the session 1907-8 the subject for lecture will be "The Renaissance and Reformation in English History"; the earlier lectures of the course will deal with those political and social movements of the fourteenth and fifteenth centuries, which lead up to the expansion of the subject in the sixteenth century.

In addition to the prescribed texts the following books will be found useful for the study of the subject: *Monumenta Franciscana*, I., ed. Brewer, Rolls Series, Introduction; Trevelyan, *England in the age of Wycliffe*; Gairdner, *Introduction to the Paston Letters*; Lupton, *Life of Colet*; Roper, *Life of More*, and Bridgett, *Blessed Thomas More*; Pollard, *Henry VIII.*, or Fisber, *Political History of England*, vol. V., ed. Oman (Longmans); Einstein, *The Italian Renaissance in England*; Gairdner, *History of the English Church to the death of Mary*; Hales, *Commonwealth*; Pollard, *The Protector Somerset*; Creighton, *Queen Elizabeth*; Hume, *Philip II.*; Paget, *Introduction to the Fifth Book of Hooker*. Reference should also be made to these longer works: Creighton, *History of the Papacy*; Froude, *History of England*; and Dixon, *History of the English Church*.

NOTE.—The classes recognized as Honours Classes in the Group of HISTORY are the Honours Classes held by the Professor of History and by the Lecturer in Constitutional Law and History.

## II. CONSTITUTIONAL LAW AND HISTORY.

*Lecturer.*

1894. WILLIAM S. McKECHNIE, M.A., LL.B., D.Phil.

ORDINARY CLASS.—This class now extends to a hundred meetings, and qualifies as a full course for graduation both for the ordinary M.A. and for Honours in History. (For subjects of study, text-books, etc., see under Faculty of Law, page 138.)

HONOURS CLASS.—In the winter session of 1907-8, in the event of any candidates for Honours in History presenting themselves, a course of fifty lectures (qualifying *pro tanto* for graduation with Honours) will be given on the early Constitutional History of England till 1295. The class text-book will be Stubbs, *Select Charters*. Before joining the class students are advised to read Medley, *Constitutional History*, and the following works are suggested for the use of students before or during the session:—Stubbs, *Constitutional History*; Pollock and Maitland, *History of English Law*; McKechnie, *Magna Carta*. The class meets on Mondays, Wednesdays, and Fridays at 12 noon.

## III. ROMAN LAW.

(See under Faculty of Law, page 137.)

## II.—FACULTY OF SCIENCE.

The Faculty of Science was instituted by Ordinance No. 31 of the Universities Commission (1889) of date 5th June, 1893, and embraces the classes of Mathematics, Natural Philosophy, Astronomy, Chemistry, Geology, Zoology, Botany, Anatomy, Physiology, Civil Engineering and Mechanics, and Naval Architecture. In this Faculty there are also classes in Electricity—Pure and Applied, Electrical Engineering, Mining, Physical Chemistry, Organic Chemistry, Metallurgical Chemistry, and Public Health.

### I. MATHEMATICS.

(See under Faculty of Arts, page 85.)

### II. NATURAL PHILOSOPHY.

(See under Faculty of Arts, page 86.)

### III. ASTRONOMY.

The Professorship of Practical Astronomy was founded in the year 1760, conjointly with the office of Observer in the University of Glasgow, and is in the gift of the Crown. By Ordinance No. 31 of the Universities Commission (1889) of date 5th June, 1893, it is now called Astronomy, and the Professor is a member of the Faculty of Science, the Chair having been transferred by the Universities Commission in 1893 from the Faculty of Arts to the newly instituted Faculty of Science.

#### *Professors.*

1760. Alex. Wilson, LL.D.	1803. James Cooper, D.D.
1784 <sup>1</sup> . Patrick Wilson, LL.D.	1836. John P. Nichol, LL.D.
1799. W. Meikleham, LL.D.	1859. R. Grant, LL.D., F.R.S.
1893. LUDWIG BECKER, Ph.D., F.R.A.S.	

An Observatory has always existed in connection with this Chair. The present Observatory is situated on an eminence in the vicinity of the University buildings.

Dr. Wilson, the second occupant of the Chair, bequeathed to the University the sum of one thousand pounds, upon the condition that the interest thereof should be applied to the purchase of instruments and books for the use of the Professor of Astronomy and the students attending his prelections.

<sup>1</sup> Dr. P. Wilson was assistant to his father from 5th June, 1782.

The Trustees of the Bellahouston Bequest Fund made in 1894 a grant of eleven hundred pounds for the improvement of the Observatory.

The Professor of Astronomy delivers two Courses of Lectures on Astronomy at the University during the session, and gives expositions on instruments and methods of observation at the Observatory.

*First Class.*

Subjects: Spherical Astronomy—The celestial sphere, description and theory of instruments, determination of latitude and time, Precession, Nutation, Aberration, Figure of the Earth, Eclipses, Occultations, Determination of Orbits.

The class meets at 3 P.M. on Mondays, Wednesdays, and during the first half of the session on Fridays. Practical Demonstrations at the Observatory.

Book recommended for general reading:—Charles A. Young, *Manual of Astronomy* (Ginn & Co., Boston and London, 1902).

*Second Class.*

Subject: Celestial Dynamics.

The students ought to be well prepared on the subjects of the Intermediate Honours Mathematical Class.

The class meets at 3 P.M. on Tuesdays and Thursdays, and during the second half of the session on Fridays.

Attendance on the two classes, either in the same session or in different sessions, counts as a full course for the Degree of M.A. The first and second classes, which may be taken in one session, with practical work at the Observatory, are a full course for the Degree of B.Sc.; the practical work at the Observatory may be done during the winter or summer session, and the student may undergo his Degree examination before he has finished his practical work.

#### IV. CHEMISTRY.

(See under Faculty of Medicine, page 110.)

##### ORGANIC CHEMISTRY.

This Lectureship was instituted by the University Court in 1905.

*Lecturer.*

T. S. PATTERSON, Ph.D., B.Sc.

A general course of 40 lectures is delivered during the summer session. This class, which counts as a half course,

must be taken by all offering Chemistry for the Final Science Examination. The time of meeting is arranged, so far as possible, to suit the convenience of students who wish to attend.

In the course, the chemistry of the aliphatic compounds will be sketched, important subjects such as the carbohydrates, aceto-acetic ester and malonic ester syntheses, stereoisomerism, the ureides, etc., being treated in some detail. Thereafter the chemistry of the carbo-cyclic, and a few of the more important hetero-cyclic compounds, is fully described, special attention being devoted throughout to the results of recent research. The lectures are illustrated by experiments, but since students taking the class are advised to take a laboratory course at the same time, when they may themselves carry out the more important operations described and prepare specimens of typical organic compounds, these experiments will only be such as are of a somewhat special character, and not suitable for general laboratory work.

Books recommended:—A. F. Hollemann, *Text-book of Organic Chemistry*; J. B. Cohen, *Theoretical Organic Chemistry*; A. Berntsen, *A Text-book of Organic Chemistry*. V. Meyer and P. Jacobson, *Lehrbuch der Organischen Chemie*. J. B. Cohen, *Practical Organic Chemistry for Advanced Students*; L. Gattermann, *Practical Methods of Organic Chemistry*.

(For Elementary Courses in Organic Chemistry, see Faculty of Medicine, p. 112.)

#### METALLURGICAL CHEMISTRY.

This Lectureship was instituted by the University in 1899.

##### *Lecturer.*

CHARLES E. FAWSITT, D.Sc., Ph.D.

Lectures are given thrice weekly throughout the Winter Session. For convenience the course is divided into two parts: Class A, October to December; and Class B, January to March. Students may enrol for a half-course on payment of half the fee for the full course. This class is the qualifying graduation course in Metallurgy for students taking the B.Sc. Degree or the Certificate of Proficiency in Mining Engineering. Attendance on the course is recommended, but is not compulsory, to students taking Chemistry as a subject in the Final B.Sc.

(Pure Science) Degree. Should sufficient students present themselves, Class A or B will also be held during the Summer Session.

**SUBJECTS, Class A.**—Occurrence, Preparation, Properties and Testing of Fuels and Refractory Materials, Types of Furnaces, The Extraction of Metals from their Ores (including Electro-metallurgy).

**Class B.**—The Microscopical Examination of Metals, especially of Copper, Copper Alloys, Cast Iron, and Steel. The Melting and Transformation Points of Metals and Alloys. Analysis of Ores and Metals. Refining of Metals. Properties and Uses of Metals, especially of Wrought Iron, Cast Iron, Carbon Steels, and Special Steels.

**Laboratory Course.**—Students should attend two and a half hours daily during the Winter Session.

Excursions are arranged throughout the session.

**Text Books.**—Horns, *Principles of Metallurgy*; Schnabel and Louis, *Handbook of Metallurgy*; Sexton, *Fuel and Refractory Materials*; Osmond and Stead, *Microscopic Analysis of Metals*; Macfarlane, *Laboratory Notes on Practical Metallurgy*; Beringer, *A Text-Book of Assaying*.

## PHYSICAL CHEMISTRY (INCLUDING RADIO-ACTIVITY).

This Lectureship was instituted by the University Court in 1904.

*Lecturer.*

1904. FREDERICK SODDY, M.A.

### I. PHYSICAL CHEMISTRY.

This class, together with practical work in the Physical Chemistry laboratory, must have been taken by all offering chemistry for the Final Science Examination. It will be held during the Winter Session, and will comprise 40 lectures. Times will be arranged at the commencement of the session.

**Syllabus.**—Historical development of chemical theory; the relations between matter and energy; the atomic and molecular theories; conservation of energy and the laws of thermodynamics; detailed study of gases; the relations between the gaseous and liquid states; the methods of liquefaction of gases and of refrigeration; chemical change and chemical dynamics; equilibrium and balanced actions; dissociation, explosion, tautomerism; solutions and osmotic pressure; molecular weight

of dissolved substances; relations between liquids and solids; eutectics and cryohydrates; phase rule; laws of thermochemistry; electro-chemistry; electrolysis; theory of electrolytic dissociation of solutions; electro-motive force of chemical change; electro-technical chemical processes; recent advances and methods of inorganic chemistry, including some selected researches.

Books recommended:—Walker's *Introduction to Physical Chemistry*, or Ostwald's *Outlines of General Chemistry*, *Text Books of Physical Chemistry*, edited by Sir William Ramsay.

In conjunction with these lectures a practical class will be held during the last six weeks of the Winter Session. The Physical Chemistry Laboratory will be open daily for this purpose, and Class Certificates will not be given until the Practical Course has been taken.

*Syllabus*.—Determination of molecular weights by vapour density, freezing point and boiling point methods; conductivity of electrolytes; electro-chemical equivalents; measurement of single potential differences; electro-chemical analysis of metals; electrolytic and electric furnace chemical preparations; use of refractometer, polarimeter, and spectroscope in chemistry; determination of reaction velocity; gas manipulation and gas analysis; radio-active measurement, and analysis of radio-active constituents in minerals.

## II. RADIO-ACTIVITY.

A course of fifteen lectures in this subject will be held once every two years during the Winter Session. The course will not be given this year, but next in 1908-9. It is designed to cover the important developments of recent years following on the discoveries of new types of radiation, and is recommended to candidates for the Final Science Examination, and for advanced medical students.

*Syllabus*.—Radiation phenomena; cathode-rays and X-rays; the radio-active elements, uranium, thorium, radium, polonium, and actinium; the distinguishing features of their radio-activity; methods of measuring radio-activity; the ionisation of gases; the  $\alpha$ ,  $\beta$ , and  $\gamma$  rays; the radio-active emanations and induced activity; thorium X and uranium X; radio-active change; theory of atomic disintegration; the transmutation of

radium; the internal energy of the chemical elements; the bearing of radio-activity on other sciences; the evolution of the elements; the economic aspect of atomic disintegration, and its connection with the theory of currency.

The course will be experimentally illustrated, and arrangements will be made in the physical chemistry laboratory for practical instruction and original research in this subject. Books recommended:—E. Rutherford, *Radio-activity*; F. Soddy, *Radio-activity, an Elementary Treatise*.

#### V. GEOLOGY.

This Chair was founded by the University Court Ordinance No. VIII.<sup>1</sup> (Glasgow, No. 3) issued on 12th February, 1903, and approved by His Majesty in Council on 11th August, 1903, an endowment of fifteen thousands pounds sterling having been provided by the Carnegie Trust, the Bellahouston Trust, and other Donors. The Professor is appointed by the University Court, and is a Professor in the Faculty of Science.

In 1876 the late Mrs. Honyman Gillespie of Torbanehill, endowed a Lectureship in Geology, to be called the Honyman Gillespie Lectureship, in memory of her husband, W. Honyman Gillespie, Esq. The Lectureship was attached by the Deed of Foundation to the Chair of Natural History, but power was given to the Trustees to withdraw it from that chair and to attach the income to the Chair of Geology when founded. The Trustees have agreed to exercise that power and pay over the annual income of the Honyman Gillespie Lectureship to the University Court to augment the salary of the Professor of Geology.

#### *Professor.*

1904. JOHN WALTER GREGORY, D.Sc., F.R.S.

Geology is a subject of study for the Degrees of M.A., B.Sc. in Pure Science, B.Sc. in Engineering, B.Sc. in Mining, B.Sc. in Agriculture, and B.Sc. in Public Health. For the Degree in Arts there will be one hundred meetings of the class, including Laboratory and Field Work; for the B.Sc. in Public Health fifty-two meetings, including Laboratory and Field Work; for the B.Sc. in Agriculture eighty meetings, including Laboratory and Field Work; for the B.Sc. in Engineering one hundred

<sup>1</sup> The text of this Ordinance was printed in full in the University Calendar for 1904-5, pp. 768-770.



meetings, including Laboratory and Field Work. The course for the B.Sc. in Pure Science is divided into two parts: in Part I. the course consists of one hundred meetings, of which fifty are lectures; Part II. consists of one hundred meetings, of which fifty are lectures. Before admission to Part II. a student must produce a certificate showing that he has done the work required in Part I. The course in Geology for B.Sc. in Mining Engineering comprises one hundred meetings, divided into a course of fifty lectures in the second year (in addition to which fifty meetings for practical work are recommended), and a course of fifty meetings taken after Christmas in the third year.

#### VI. ZOOLOGY.

(See under Faculty of Medicine, page 109.)

#### VII. BOTANY.

(See under Faculty of Medicine, page 108.)

#### VIII. ANATOMY.

(See under Faculty of Medicine, page 113.)

#### IX. PHYSIOLOGY.

(See under Faculty of Medicine, page 115.)

### X. CIVIL ENGINEERING AND MECHANICS.

The Professorship of Civil Engineering and Mechanics was instituted by Queen Victoria in 1840, and is in the gift of the Crown. The emoluments of the Chair were increased in 1872 by a supplemental endowment<sup>1</sup> by the late Mrs. Elder, widow of Mr. John Elder, engineer and shipbuilder, Glasgow; and more recently, in 1876, an Assistantship was founded by bequest of Mrs. Black, widow of the Rev. Dr. Black, Barony Church, Glasgow.<sup>2</sup> The University Court instituted a lectureship on Electrical Engineering in 1898, and one on Engineering Drawing and Design in 1901.

#### *Professors.*

1840. Lewis D. B. Gordon, C.E.

1855. William J. Macquorn Rankine, C.E., LL.D.

1873. James Thomson, C.E., LL.D., D.Sc., F.R.S.

1889. ARCHIBALD BARR, D.Sc., M.Inst.C.E., M.I.Mech.E.

<sup>1</sup> The annual income of a sum of £5000.

<sup>2</sup> The salary for the Young Assistantship thus founded is now £140.

*Lecturer on Electrical Engineering.*

John S. Nicholson, B.Sc., Whit. Sch., A.M.I.E.E.

*Lecturer on Engineering Drawing and Design.*

Henry Bamford, M.Sc., A.M.Inst.C.E.

*Young Assistant.*

Thomas B. Morley, B.Sc.

*Demonstrators.*

The courses in Engineering extend throughout the winter session, that is, from 17th October till 26th March. They comprise Lectures on Engineering Principles and Practice, Instruction in Geometrical Drawing and in Engineering Drawing and Design, Laboratory Practice, and visits to Engineering Works and Manufactories.

These courses are designed primarily to suit students who intend to devote themselves to Civil, Mechanical, Electrical, or Mining Engineering; but the work of the classes will be found of direct practical utility to architects and to men who are engaged in any occupations connected with manufactures.

The work of the classes is not intended in any way to supersede the usual requirements of pupilage or apprenticeship in Engineering, but to enable the Engineer to gain such a knowledge of the principles underlying his profession or trade as he cannot acquire by only working in the office, in the field, or in the workshop. The classes may be attended either before or after pupilage or apprenticeship, or concurrently therewith. In most cases the students spend the summer six months in works or offices and thus get their scientific and practical training on the "sandwich" system.

Six Courses of Lectures, including Electrical Engineering, are arranged for, five of which are delivered in each session.

CLASS I.—THE MATERIALS OF CONSTRUCTION AND THE ELEMENTS OF APPLIED MECHANICS.—Daily at 9 A.M. Subjects: Preparation, Properties and Uses of the Chief Constructive Materials, especially of Cast Iron, Wrought Iron, Brass and other Alloys, Timber, Building Stones, Cements and Concrete; Graphics; Steam, Gas, and Oil Engines, and other Prime Movers; and the more Elementary Principles of Mechanics in their application to problems connected with Engineering Structures and Machines.

**CLASS II.—SURVEYING, LEVELLING, AND SETTING-OUT OF WORKS.**—This class will not be held during the present session. It is held in alternate years with Class III., on Mondays, Wednesdays, and Fridays at 10 A.M.—Subjects:—Surveying with the Chain and with Angular Instruments; Telemetry; Levelling; the Optical and Mechanical Principles, Tests, and Adjustments of Surveying and Levelling Instruments; Setting-out of Works, especially Setting-out of Railways; Mensuration of Areas of Land and of Volumes in Earth Works; the Execution of Civil Engineering Works. The Lectures will treat for the most part of those portions of the subject which are not readily learned in ordinary field and office practice.

**CLASS III.—PRIME MOVERS AND THE MECHANICS OF MACHINERY.**—Mondays, Wednesdays, and Fridays, at 10 A.M.—The Lectures treat of the Sources of Energy; Fuels; the Theory of Steam, Gas and other Heat Engines; the structural details of Boilers and Engines; the Mechanics of Machinery; the Elements of Machine Design; the Transmission of Power; and Friction and Lubrication in Machines. Attendance on this class should be preceded by attendance on Class I. in the case of students entering with no knowledge of Applied Mechanics.

**CLASS IV.—HIGHER APPLIED MECHANICS AND HYDRAULICS.**—Daily, except Saturday, at 9 A.M. The Lectures treat of the Strength and Elasticity of Materials; the Strength and Stiffness of Beams, Girders, Columns, Framed Structures, Shafts, etc.; Hydraulics and Hydraulic Appliances, including the Gauging of Water, the Flow of Water in Pipes, and the Principles of Water Wheels, Turbines, and Centrifugal Pumps.

**ENGINEERING DRAWING AND DESIGN.**—The drawing classroom is open daily, except Saturday, from 9 A.M. till 5 P.M. Each student will be required to attend six hours per week (at times to be arranged at the beginning of the session), and will be expected to devote extra time to the performance of work. The work of the classes will comprise Lectures and Practice in Civil and Mechanical Engineering Drawing; Lectures and Practice in Design of Structures; Descriptive Geometry, Graphical Statics, and the Kinematics of machinery; and the performance of graphical work and calculations in connection with the lecture courses.

ENGINEERING LABORATORIES.—The James Watt Engineering Laboratories, which have been erected and equipped at a total cost of about £40,000, are now complete. A separate description of the Laboratories will be published. The equipment includes a steam boiler for 100 horse power, steam, gas, oil, petrol, and hot-air engines; a 50 horse power steam turbine; a refrigerating plant; 100-ton and 10-ton testing machines arranged for tests in tension, compression, bending, and torsion, and fitted with autographic stress and strain recorders; cement testing appliances; a variety of water turbines; apparatus for experiments on the flow of water through orifices and pipes, and other apparatus for investigations bearing upon Engineering Science and Practice.

The Laboratories are open daily; each student will be required to attend at least six hours per week (at times to be arranged at the beginning of the session).

For the purposes of Ordinance No. 23, Section IX. (see page 254), Class IV., together with Laboratory practice, counts as one whole course; any two of the other Lecture Classes (I., II., III., Electrical Junior, Electrical Senior), together with Laboratory practice, count as the other whole course. Candidates taking the second option under Section IX., *i.e.* candidates for the Degree of B.Sc. on the side of Naval Architecture, are required to take Class IV. together with Laboratory practice.

### ELECTRICAL ENGINEERING.

A Lectureship in Electrical Engineering was instituted by the University Court in 1898.

#### *Lecturers.*

- 1898. John Dewar Cormack, B.Sc.
- 1901. James Blacklock Henderson, D.Sc.
- 1905. John Steel Nicholson, B.Sc., Whit. Sch.

Two classes are held during the Winter Session. For the purposes of Ordinance No. 23, Section IX. (see page 254) the Junior Class, along with Laboratory practice, *or* the Senior Class, with Laboratory practice, counts as a half course, while both classes, along with Laboratory practice, constitute a full course.

The Electrical Laboratory is part of the new James Watt

Engineering Laboratories, and is open daily, except Saturdays, for experimental and research work.

*Junior Class.*—Mondays, Wednesdays, and Fridays at 8 A.M. Subjects :—Practical units of current, quantity, E.M.F., resistance, power, and energy; Ammeters, voltmeters, ohmmeters, wattmeters, and energymeters; Winding of resistances. Cells and the calculation of E.M.Forces; Secondary cells and their chemical reactions; Electro-chemical processes. Magnetic properties of iron and steel and their measurement; the magnetic circuit; Hysteresis and hysteresis losses. Electro-magnetic induction and the production of E.M.F.; Development of the dynamo; Winding of field magnets and armatures. Conditions for sparkless commutation; characteristic curves; losses in dynamos and motors; efficiency of dynamos and motors; methods of testing dynamos and motors. Modern direct current machinery; types of motors; motor starters and controllers; tramway, lift and crane controllers. Direct current distribution; Kelvin's law of economy. Alternating E.M.Forces and currents; relation between mean, maximum and effective values; rotating fields; measurement of alternating currents; E.M.Forces and power; power factors. Alternators; arc lamps.

Text-book: Crapper, *Electric and Magnetic Circuits*.

Books of reference: Sheldon and Mason, *Direct Current Machinery*; Sheldon and Mason, *Alternating Current Machinery*; Rosenberg, *Electrical Engineering*.

*Senior Class.*—Tuesdays, Thursdays, and Saturdays, at 8 A.M. Subjects:—Direct current motors series and shunt; accelerating torque; mechanical characteristic. Dynamo design; relation of size to output; proportioning of parts; choice and calculation of winding; theory of commutation; construction of commutators. Alternate current phenomena; single and polyphase currents; mathematical and graphical treatment of alternating current problems; armature reaction. The working of alternators singly and in parallel; methods of paralleling; armature reaction in polyphase machines and rotary converters; design of polyphase machines; design of transformers. Induction motors, single and polyphase; methods of starting; repulsion motors; compensated asynchronous and synchronous motors and generators. Characteristics of alternators and motors; testing of alternators; compounding of alternators, distribution of power and distribution losses.

Text-book : Steinmetz, *Elements of Electrical Engineering*.

Books of reference : Steinmetz, *Alternating Current Phenomena* ; S. P. Thompson, *Alternating Current Machinery* ; Kapp, *Dynamos and Alternators* ; C. G. Lamb, *Alternating Currents*.

*Practical Course*—The equipment of the Electrical Laboratories includes a 30 K.W. three-phase generator, and a 7 K.W. two-phase generator, both motor driven, two 9 K.W. rotary converters, two tramway motors mounted for experimental work, a 5 K.W. continuous current motor generator or booster, a 5 K.W. balanced set, and motors of various kinds for continuous and alternating current. The electrical plants in other parts of the James Watt Laboratories also provide subjects for experiment. These include a 34 K.W. de Laval steam turbine dynamo, a 30 K.W. high speed engine and dynamo, an electrically driven lift, and motor-driven fan, air pump and centrifugal pump. The instrument room is equipped with the most modern measuring instruments.

*As to the Degrees of B.Sc. and D.Sc. in Engineering Science, see Index.*

*As to the Certificate of Proficiency in Engineering Science, see Index.*

*As to the Muir Bursaries, the Metcalfe Bursaries, the Dr. Strang Bursaries, the George Young Bursary, the Walker Prizes, the George Harvey Prize, the James Watt Scholarship, and the Lindsay Burnet Medal in the Department of Civil Engineering and Mechanics, see Index.*

## XI. MINING.

### THEORY AND PRACTICE OF MINING.

On 26th March, 1902, James S. Dixon, LL.D., Fairleigh, Bothwell, recognising the want of a means of teaching the higher branches of the Theory and Practice of Mining, and the desire for acquiring such knowledge displayed by many young men connected with mining, made an offer of £10,000 to found a Chair or Lectureship of Mining in the University of Glasgow. The University Court accepted the offer, and a Lectureship has accordingly been founded. The Lecturer is appointed by a special body consisting of (1) the members of the Court, (2) the President of the Mining Institute of Scotland, (3) His

Majesty's Inspector of Mines for the Western District of Scotland, (4) His Majesty's Inspector of Mines for the Eastern District of Scotland, (5) the President of the Lanarkshire Coalmasters' Association, and (6) the Donor during his life or till his resignation. The appointing body has the power at the expiry of the first five years from the institution of the Lectureship, and at the expiry of every five years thereafter, to revise and alter the scope of the Lectureship and the duties of the Lecturer. In 1907 Dr. Dixon increased the foundation by the sum of £6,500, and the University Court has taken the necessary steps for making the Lectureship a Chair.

*Lecturer*—1902. CHARLES LATHAM, M.Inst.M.E.

The courses in mining extend throughout the winter session. Arrangements have been made for a limited number of students to obtain practical experience, during the summer months, at some of the largest and best equipped collieries in Scotland.

Under the Coal Mines Regulation Act (1887) Amendment Act (1903), both the Degree of B.Sc., and Certificate of Proficiency, in Mining Engineering are now recognised by the Home Office as equivalent to two of the five years' practical training necessary to qualify as a mine manager.

### MINING ENGINEERING.

CLASS I.—Mondays and Wednesdays at 3 P.M. Subjects:—Prospecting, Boring, Sinking, Winding and Ventilation.

CLASS II.—Tuesdays and Thursdays at 3 P.M. Subjects:—Explosives, Haulage, Pumping, Lighting, Timbering, and Coal Cutting Machinery.

CLASS III.—Fridays at 3 P.M. Subjects:—Methods of working Coal and Metalliferous Mines, surface arrangements for dressing and cleaning coal and other minerals.

*As to the degree of B.Sc. in Mining Engineering, and the Certificate of Proficiency in Mining Engineering, see Index.*

### EVENING CLASSES.

For the benefit of those students who do not wish to take the degree, a similar course to the above will be given in the evening as follows: Class I., Mondays and Wednesdays at 6.30 P.M.; Class II., Tuesdays and Thursdays at 6.30 P.M.; Class III., Fridays at 6.30 P.M.

## MINE MANAGEMENT.

This course is intended for students who wish to qualify as mine managers under the Coal Mines Regulation Act, and extends over two years.

CLASS I.—Mondays at 7.30 P.M. Subjects:—Boring, Sinking, Explosives, Winding, and Ventilation.

CLASS II.—Wednesdays at 7.30 P.M. Subjects:—Methods of Working, Haulage, Pumping, Lighting, Timbering, Coal Cutting Machinery, and Surface Arrangements.

## XII. NAVAL ARCHITECTURE, INCLUDING MARINE ENGINEERING.

The John Elder Chair of Naval Architecture was founded by the University in 1883. An endowment of £12,500 was provided by the late Mrs. Elder, widow of Mr. John Elder, engineer and shipbuilder, Glasgow. The Professor is appointed by the University Court.

*Professors.*

1883. Francis Elgar, LL.D. | 1886. Philip Jenkins.

1891. JOHN HARVARD BILES, LL.D.

The courses of the Professor comprise a Junior Course of Lectures and Examinations upon Naval Architecture and Marine Engine and Boiler Design, and a Senior Course of Lectures and Examinations upon Naval Architecture and Marine Engine Design; also a Junior and a Senior Course of Instruction in Ship Drawing and Calculations and Marine Engine Drawing and Design. The Junior Course of Lectures and Examinations may be taken in either the first or the second year of the regular curriculum, and the classes will meet on Mondays, Wednesdays, and Fridays at 12 noon, or at any other hour that may be found convenient. The classes of the Senior Course will be held on Mondays, Tuesdays, and Thursdays from 11 A.M. to 12 noon, or at any other hour that may be found convenient.

The Junior Course of Instruction in Ship Drawing and Calculations and Marine Engine Drawing and Design is expected to be taken by students in the first year of the regular curriculum; and the classes will be held on Tuesdays, Wednesdays, Thursdays, and Fridays from 2 P.M. to 5 P.M., or at



any hour that may be found convenient. The classes of the Senior Course will be held on Tuesdays, Wednesdays, Thursdays, and Fridays from 2 P.M. to 5 P.M., or at any other hour that may be found convenient.

*As to the Degree of B.Sc. on the side of Naval Architecture and Marine Engineering, see Index.*

*As to the Lloyd's Register Scholarship, and the Kirk Memorial Prize, see Index.*

### XIII. PUBLIC HEALTH.

(See under Faculty of Medicine, p. 121).

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## III.—FACULTY OF MEDICINE.

The Faculty of Medicine embraces the Classes of Botany, Zoology, Physics, Chemistry, Anatomy, Embryology, Physiology, Materia Medica, Pathology, Forensic Medicine, Surgery, Clinical Surgery, Practice of Medicine, Clinical Medicine, Midwifery, Insanity, Diseases of the Eye, Diseases of the Ear, Diseases of the Throat and Nose, Diseases of the Skin, and Diseases of Children.

#### ORDER OF STUDY RECOMMENDED.

*It is advantageous that the Student should commence his studies in Summer. Candidates are advised not to go up for examination in Chemistry and Zoology till the Autumn before the Second Winter.*

1ST SUMMER.—Physics, Botany.

1ST WINTER.—Chemistry, Junior Anatomy, Zoology. Practical Zoology may also be taken. Practical Chemistry in Laboratory may also be taken if desired.

2ND SUMMER.—Practical Anatomy, Embryology. Practical Chemistry may be taken if not already attended.

2ND WINTER.—Senior Anatomy, Physiology, Practical Anatomy.

3RD SUMMER.—Practical Anatomy, Practical Physiology, Practical Pharmacy, Clinical Surgery and Hospital.

3RD WINTER.—Surgery, Materia Medica, Clinical Surgery, Hospital and Dispensary Practice.

4TH SUMMER.—Practical Pathology, Medical Jurisprudence and Public Health, Operative Surgery, Clinical Medicine and Hospital.

4TH WINTER.—Pathology, Practice of Medicine, Midwifery, Also Clinical Class and Hospital.

5TH SUMMER.—Insanity, Diseases of Women, the Skin, the Eye, the Ear, the Throat and Nose, Vaccination, Hospital, Fevers.

5TH WINTER.—Hospital, Midwifery Practice, and Specialities of Practice not previously attended to.

A. The subjects of the *First Professional Examination* for the Degrees of Bachelor of Medicine and Bachelor of Surgery are taught in the following classes:—

#### I. BOTANY.

The subject of Botany was from 1718 conjoined with Anatomy. The combination being found unsuitable, a separate Lectureship on Botany was instituted, and ultimately, in 1818, the Professorship was founded. The appointment is vested in the Crown. (See p. 208, as to Botanic Garden.)

##### *Professors.*

1818. Robert Graham, M.D.	1845. G. A. Walker-Arnott, LL.D.
1820. Sir W. J. Hooker, LL.D.	1868. Alexander Dickson, M.D.
1841. John H. Balfour, M.D.	1879. I. B. Balfour, M.D., D.Sc.
1885. FREDERICK O. BOWER, Sc.D., F.R.S.	

Lectures are given at the University every Tuesday, Wednesday, Thursday, Friday, and Saturday at 8 A.M., during the summer session. On Saturdays, according as the season and the weather permit, either excursions are made for the study of plants in the field, or microscopic demonstrations are given in the Laboratory.

Demonstrations on fresh specimens are given in the Botanic Garden or at the University during the latter part of the session.

The Botanical Laboratory at the University is open daily from 9 A.M. to 4 P.M. from the end of April to the middle of July. Classes for elementary practical work in the Botanical Laboratory are formed during these months at hours, so far as practicable, to suit the convenience of students.

A course of Advanced Lectures, as well as a more extended course of Practical Instruction, designed for candidates for the Degree of M.A., the Science Degree, or other more advanced students, is given in the Laboratory during the winter session. Notice of times of meeting of these classes will be given in due course.

The advanced practical class in winter will meet daily at 11 A.M. to 1 P.M. The Laboratory will be open for work from 9 A.M. to 4 P.M.

A qualifying half course for the curriculum in Arts is given during the summer session, and is suitable for the Teachers in Training. This course replaces the non-qualifying course given in previous years.

The University Herbarium may be consulted by students on applying to the Professor.

Students in the Botanical Class may obtain, by applying to the Professor, specimens of plants from the Botanic Garden for private study.

*For the "Dobbie Smith" Gold Medal, see under "Prizes."*

## II. ZOOLOGY.

This Professorship, under the name of Natural History, was founded by George III. in 1807. It originally comprehended both Zoology and Geology, but when the Chair of Geology was founded in 1903 by the University Court Ordinance No. viii., it was provided that the Chair of Natural History should thenceforth be called the Chair of Zoology. The Professor is appointed by the Crown.

### *Professors.*

1807. Lockhart Muirhead, LL.D.	1857. Henry D. Rogers, LL.D.
1829. Wm. Couper, M.D.	1866. John Young, M.D.
1902. J. GRAHAM KERR, M.A.	

*Senior Assistant*—Edward J. Bles, B.A., D.Sc.

Lectures on Zoology, including Comparative Morphology, are given daily at 9 A.M. throughout the Academical year.

The first 50 Lectures of the Course are introductory in their nature. In these Protozoology is treated in considerable detail while the more important groups above the Protozoa are treated

in outline, special attention being devoted to such as are of general zoological interest, and to such as are, from their parasitic habits or otherwise, of special importance to the Student of Medicine. Details of the anatomy of the higher Vertebrates are not dealt with.

In connection with this part of the Course, a Laboratory Class in Elementary Practical Zoology will be held daily from 11 to 1, and, if necessary, repeated in the afternoon from 3 to 5. In this class Students will examine for themselves examples of the main groups treated of in the systematic lectures.

During the latter half of the Winter and during the Summer Session certain portions of the subject will be treated more fully—in Winter the Comparative Anatomy and Embryology of the Vertebrata, and in Summer the more general problems of Zoology (such as Evolution Theory) together with the special Zoology of one or more of the Phyla of the Invertebrata.

Practical work will be arranged at suitable hours to illustrate the Lectures, and that during the latter half of the Winter Session will be of such a nature as to give Students an introduction to the methods of Laboratory technique.

The Zoological collections in the Hunterian Museum, though not yet adapted to teaching purposes, are open free to students.

Text-books for Elementary Class: Shipley & MacBride, *Zoology*; Marshall & Hnrst, *Practical Zoology*.

### III. PHYSICS.

(See under Natural Philosophy in Faculty of Arts, p. 90.)

### IV. CHEMISTRY.

This Professorship was founded by George III. in 1817, previous to which time (from 1747) there were Lecturers on Chemistry appointed by the University. The Professor is appointed by the Crown.

#### *Lecturers.*

1747. William Cullen, M.D.	1769. William Irvine, M.D.
1756. Joseph Black, M.D.	1787. Thomas C. Hope, M.D.
1766. John Robison, LL.D.	1791. Robert Cleghorn, M.D.

*Professors.*

1818. Thomas Thomson, M.D. | 1852. Thomas Anderson, M.D.  
 1874. JOHN FERGUSON, M.A., LL.D., F.S.A.

*Assistants.*

T. S. Patterson, Ph.D., B.Sc. | Charles E. Fawsitt, D.Sc., Ph.D.  
 James Roberts, F.C.S.

**SYSTEMATIC CHEMISTRY.**—The Lectures are delivered daily at 10 A.M. during the winter session. They treat of the general principles of Chemical Philosophy and the preparation and properties of the Non-Metallic and the principal metallic elements and their compounds. The latter part of the course is devoted to the elements of Organic Chemistry.

Attendance on this course qualifies for Degrees in Arts and Medicine and for the First Examination for Degrees in Science.

**Tutorial Classes.**—Students desiring to obtain a qualifying certificate for Degrees in connection with the systematic course are required to give attendance at one of the Tutorial Classes, each of which meets twice a week. The teaching in these classes is supplementary to that given in the systematic lecture course, and is given partly by means of oral examination and written exercises in Chemical Arithmetic.

Written examinations of the whole class are held at intervals during the session.

**HIGHER COURSES.**—Short courses on Metallurgical, Physical and Organic Chemistry are given during the winter and summer sessions, and to meet the requirements of Ordinance No. 12, Section IX. (4) (p. 247), a higher course will be delivered as required. It will deal with the Rare Elements, Theories of Chemistry, and the History of Chemistry.

**CHEMICAL LABORATORIES.**—The Laboratories are open daily (except Saturday) from 10 A.M. to 4 P.M. Junior students go through a course of inorganic preparations and qualitative analysis suitable for those proceeding to degrees in Medicine and Arts and to the First Examination for Degrees in Science. Medical students are required to spend at least two and a half hours a day at practical work. Those intending to proceed to the degree in Arts or to the first examination for a degree in Science are recommended to attend for 3-3½ hours per day during a half session or to take a full session course.

Senior students go through a course consisting of quantitative analysis including the analysis of gases, exercises in physical and electrochemistry, and organic analysis and preparations. One whole session (or two half sessions) of attendance at the laboratory, after completion of the qualifying course for the first B.Sc. Examination, is required of candidates proceeding to the Final Examination in Chemistry for B.Sc., but students are strongly advised to spend a further period before attempting the Examination.

For work to be professed by Candidates for Degree Examinations in Chemistry see pp. 238, 249.

POST-GRADUATE STUDY AND RESEARCH.—Arrangements are made for graduates and others engaging in original investigation in Organic, Physical and Metallurgical Chemistry. Particulars regarding scholarships, fellowships and bursaries tenable in the chemical laboratories may be obtained from the *Calendar*, pp. 436, 437. Those intending to take advantage of the arrangements during next session should make timely application to the Professor.

ORGANIC CHEMISTRY. *Lecturer*—T. S. Patterson, Ph.D., B.Sc. *Advanced Course of 40 lectures*—see Faculty of Science, p. 94.

Two courses of Lectures on Elementary Organic Chemistry are given.

1. *An Elementary Course of 25 lectures during the latter part of the Winter Session.*

This course is suitable for students taking the First Science Examination, for medical students, or for others who wish to attend a systematic course in Organic Chemistry without working up to the standard of Final B.Sc. in Chemistry.

The lectures are fully illustrated by experiments, and deal with the following subjects:—Methods of Analysis, Deduction of Formulæ, Classification of Organic Compounds, and the Chemistry of the following classes of substances—Aliphatic hydrocarbons, halogen derivatives, alcohols, ethers, aldehydes, ketones, acids, esters, amines, amides, and a few of the more common aromatic compounds.

2. *An Elementary Course of 20 lectures during the Summer Session.*

This course, which is more particularly intended to meet the requirements of medical students, is only held provided a

sufficient number come forward. The subject is treated much as in the winter course.

Books recommended:—Perkin & Kipping, *Organic Chemistry*, Part I.; Cohen, *Theoretical Organic Chemistry*.

#### METALLURGICAL CHEMISTRY.

(See Faculty of Science, p. 95.)

#### PHYSICAL CHEMISTRY.

(See Faculty of Science, p. 96.)

**B.** The subjects of the *Second Professional Examination* for the Degrees of Bachelor of Medicine and Bachelor of Surgery are taught in the following classes:—

#### I. ANATOMY.

This Professorship, with which Botany was at first associated, was founded in 1718 by the Crown and University jointly. After 1818 the province of the Chair was restricted to Anatomy.

##### *Professors.*

1720. Thomas Brisbane, M.D.	1781. William Hamilton, M.D.
1742. Robert Hamilton, M.D.	1790. James Jeffray, M.D.
1756. Joseph Black, M.D.	1848. Allen Thomson, M.D.,
1757. Thos. Hamilton, M.D.	LL.D., F.R.S.
1877. JOHN CLELAND, M.D., LL.D. (St. A. and Ed.), D.Sc., F.R.S.	

##### *Lecturer on Regional Anatomy and Senior Demonstrator.*

William K. Hutton, M.A., M.B., C.M.

##### *Other Demonstrators.*

Archibald N. McLellan, M.B., C.M.

George M. Gray, M.B., Ch.B.

Robert Bruce Young, M.A., M.B., C.M.

In the WINTER SESSION Anatomical Instruction is conducted in the following courses, viz:—

1. **ELEMENTARY DESCRIPTIVE LECTURES.**—This class meets on five days weekly from 11 to 12 o'clock. The Lectures comprehend a full systematic description of the Bones, Joints, Muscles and Muscular Organs, and a general view of the Nervous System and Viscera.

2. **ADVANCED DESCRIPTIVE LECTURES AND DEMONSTRATIONS.**—This class meets on six days weekly from 1 to 2 o'clock, viz., on five days for Lecture, and on Saturday for Microscopical Demonstrations. The course comprehends: 1st, Demonstrations of Regional or Topographical Anatomy, including the Distribution and Relations of the Blood-vessels and Nerves; 2nd, Histology and a Detailed Description of the Viscera, Brain, and Organs of Sense.

3. **PRACTICAL ANATOMY.**—This class is under the superintendence of the Professor and Demonstrators. The dissecting room is open from 9 A.M. to 4.45 P.M. daily, except on Saturdays, when it is closed at mid-day.

*Text-books.*—Cleland and Mackay, *Human Anatomy*; Cleland and Mackay, *Directory for Dissection*. Also, Spalteholz, *Handatlas of Human Anatomy*, or Toldt, *Atlas of Human Anatomy*, will be found a valuable and convenient auxiliary.

In the SUMMER SESSION the rooms for Practical Anatomy are open from 9 A.M. to 4 P.M. daily.

#### EMBRYOLOGY.

A Lectureship on Embryology was instituted by the University Court in 1894, but the first Lecturer, Dr. John Yule Mackay, having resigned before the beginning of the second session, temporary arrangements were made for carrying on the work of the class in 1895 and 1896.

#### *Lecturers.*

1894. John Yule Mackay, M.D.

1897. JAMES F. GEMMILL, M.A., M.D.

The *Systematic Class* meets in the Anatomy Class-room at 11 A.M. on Mondays, Tuesdays, Thursdays, and Fridays of the summer session. The course deals with Vertebrate, and specially with Human Development, a certain amount of General Embryology being also included in the earlier lectures.

A *Practical Class* in Embryology is also held in the Summer Session. The course includes:—

I. Instruction in methods.

II. Practical Study of:—(a) Maturation, fertilisation, segmentation etc. (Echinoderm material most suitable). (b) The



development of one or more of the following types,—  
(1) Cartilaginous fish, (2) Amphibian, (3) Chick. (c) Mammalian development with reference to the foetal membranes, placenta and uterus, especially in the human subject.

III. Such advanced lectures as may from time to time be necessary in order to illustrate the bearing of any part of the practical work on Comparative Embryology.

Competent workers will be given facilities for carrying out special researches.

The Laboratory will be open from 9 A.M. till 4 P.M. except on Saturdays when the hour of closing is 12 noon.

#### APPLIED ANATOMY.

This Lectureship was instituted by the University Court in 1906.

##### *Lecturer.*

1906. Robert Kennedy, M.A., M.D., D.Sc.

The course of lectures is intended for fourth and fifth year students who, having passed their anatomical examination, desire to revise those portions of anatomy which are the more necessary for clinical work. The course may also be found useful as a post-graduate one.

The subject is taught with reference entirely to its bearing on practical medicine and surgery, and is illustrated by dissections and other preparations.

The class meets in the Summer Session on Mondays, Wednesdays, and Fridays at 1 P.M. in the Anatomical Class Room.

#### · II. PHYSIOLOGY.

This Professorship was founded by Her Majesty, Queen Victoria, in the year 1839, under the name of Theory of Physic. It was subsequently known as Institutes of Medicine, and is now, in accordance with Ordinance No. 31 of date 5th June, 1893, designated Physiology.

##### *Professors.*

1839. Andrew Buchanan, M.D.

1876. John Gray M'Kendrick, M.D., LL.D., F.R.S.,  
F.R.S.E., F.R.C.P.E.

1906. DIARMID NOËL PATON, M.D., B.Sc., F.R.C.P.S.

## I. SYSTEMATIC LECTURES.

The Lectures of this course are delivered daily at 12 noon during the winter session. They are devoted to an exposition of the main principles and facts of the Physiology of Man.

Examinations are held during the session.

## II. PRACTICAL PHYSIOLOGY.

During the *summer session* Practical Instruction in Histology is given in the Laboratory by the Professor, Assistants, and the Muirhead Demonstrator, at such hour or hours as may be found convenient. Each section of the class will meet twice a week from 8 A.M. to 10 A.M. This course includes instruction in the use of the microscope, and in the microscopical examination of the various tissues and organs with the aid of modern methods of hardening, staining, cutting, and mounting preparations. During the *winter session* practical work is carried on in the Laboratories by the class in sections of convenient size. Each section meets twice a week for two hours in the afternoon and studies the experimental methods used in Physiology and their results, and the methods of chemical analysis of the fluid and solid constituents of the body.

## III. ADVANCED CLASS OF PRACTICAL PHYSIOLOGY.

This Class is intended to meet the requirements of candidates for the Degree of B.Sc. It will meet during the winter session at a suitable hour, on three days weekly, and the course will comprise about fifty-four meetings each of at least two hours duration in winter, and about thirty meetings of two hours each in summer. Students will be taught (*a*) the more advanced methods of Physiological Chemistry, (*b*) special methods in advanced Histology, and (*c*) the more advanced methods of experimental investigation. This course is wholly practical, and is designed to supplement the instruction given in the ordinary class of Practical Physiology, and to lead the student into the higher departments of physiological science.

## IV. THE LABORATORY.

The Laboratories are open daily, under the superintendence of the Professor, to whom application should be made by those who may wish to pursue original investigation.

*Text-books*: Noël Paton, *Essentials of Human Physiology*; Howell, *Text-book of Physiology*.

## V. GRIEVE LECTURESHIP ON PHYSIOLOGICAL CHEMISTRY.

The course of lectures for the Winter Session 1907-8 will deal with the chemistry of metabolism, with special reference to the products of excretion.

This course may be regarded as an extension of the physiological chemistry taught in the advanced practical class, and will deal with the higher aspects of the subject. The lectures will be illustrated, as far as possible, by means of experiments.

The laboratory for physiological chemistry will be available for special research on the same terms as those specified in the *Calendar* for Physics and Chemistry.

As to the Muirhead Demonstratorship of Physiology, see p. 153. As to the Grieve Lectureship in Physiological Chemistry, see p. 154.

## III. MATERIA MEDICA.

A Lectureship on this subject was founded by the College in 1766, and a Professorship created by the Crown in 1831.

*Lecturers.*

1766. William Irvine, M.D.	1788. Robert Cleghorn, M.D.
1787. Thomas C. Hope, M.D.	1791. Richard Millar, M.D.

*Professors.*

1831. Richard Millar, M.D.	1865. John B. Cowan, M.D.
1833. John Couper, M.D.	1880. Matthew Charteris, M.D.
1855. John A. Easton, M.D.	1897. RALPH STOCKMAN, M.D.

In the courses of instruction and in the scheme of professional examinations prescribed by Ordinance No. 14, the subjects included in the province of this chair comprise the two branches of *Materia Medica* and *Therapeutics*. In the summer course of Practical Pharmacy, which it is advisable to take before the winter course, attendance at twenty-five meetings of the class is required. Instruction is given in compounding official preparations, in writing prescriptions, and in dispensing, supplemented by demonstrations of the more important substances in the British Pharma-

copceia. The winter course is devoted to Pharmacology and Therapeutics, the official drugs of the British Pharmacopoeia being systematically considered in relation to their actions and applications in disease. In addition, lectures are given on the therapeutical aspects of Dietetics, Mineral Waters and Baths, Climate, Electricity, Massage, etc.

*Text-books.*—The manuals of *Pharmacology* by Dr. W. E. Dixon, and of *Materia Medica and Therapeutics* by Dr. Hale White, Dr. Mitchell Bruce, and Sir William Whitla; *Text-Book of Materia Medica* by Dr. C. R. Marshall; *Practice of Medicine*, by Dr. M. Charteris. More advanced books are: *Therapeutics*, by Dr. H. C. Wood; *Text-book of Pharmacology and Therapeutics*, edited by Dr. Hale White; and *Text-book of Pharmacology*, by Dr. A. R. Cushny.

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C. The subjects of the *Third Professional Examination* for the Degrees of Bachelor of Medicine and Bachelor of Surgery are taught in the following classes :—

#### I. PATHOLOGY.

This Chair was founded by Ordinance No. 29 of the Universities Commission (1889) of date 5th June, 1893. The patronage is vested in seven Curators, of whom four are nominated by the University Court and three by the Directors of the Western Infirmary. By agreement with the Western Infirmary, full accommodation and facilities for teaching are provided for the University in the Pathological Institute recently erected at the Western Infirmary. By mutual arrangement the Professor is the Pathologist to the Infirmary, and the whole material of that institution is available for teaching purposes.

Before the founding of the Chair, Pathology had been taught by Dr. Joseph Coats, who was appointed Lecturer in 1890, and who also held the office of Pathologist to the Western Infirmary.

#### *Professors.*

1894. Joseph Coats, M.D.

1899. ROBERT MUIR, M.A., M.D.

*First Assistant*—John Hammond Teacher, M.A., M.D.

*Second Assistant*—John Shaw Dunn, M.B., Ch.B.

*Demonstrator*—Leonard Findlay, M.D., Ch.B.

The course in Pathology and Practical Pathology extends over a summer and winter session. Students are requested to observe that the course starts in summer, and are recommended not to commence their pathological studies in winter.

In the summer session the class meets for two hours on four days each week. About fifteen lectures of an hour each are given on those subjects of General Pathology which can be conveniently illustrated by histological work, *e.g.*, the degenerations, inflammation, the processes of repair, tumours, etc., and the students thereafter prepare and examine sections of tissue illustrating the subjects of the lectures. The Special Pathology of one or two systems, *e.g.*, the circulatory and respiratory are treated in a corresponding manner. Demonstrations of Pathological Anatomy are also given. The methods of Bacteriology are taught in small classes of about twenty students.

In the winter session the class meets for an hour daily. There will be (*a*) lectures with demonstrations on general pathology, including the disturbances of the circulation, the general pathology of infection, fevers, etc., (*b*) lecture demonstrations on Tuesdays and Fridays on special pathology. Students who have already attended a full course in pathology may attend these on payment of a fee of £1 1s. (*c*) Meetings for practical work in special histology and bacteriology. Of these there will be about thirty. Tutorial classes are also held during the Session.

The Museum of the Western Infirmary is open to all Infirmary students, and a printed catalogue is provided. The post-mortem examinations, which are conducted from 10 A.M. onwards, are also open to the students. Each student during his curriculum must attend at least twenty post-mortems, and must produce evidence that he has received instruction in the methods of post-mortem examination.

*Post-graduate or Laboratory Courses in Practical Pathology and Bacteriology* are held in October. These courses are open also to senior students. Particulars may be obtained from the Professor.

*Text-books.*—A *Manual of Pathology* by Dr. Joseph Coats, or a *Text-book of Pathology* by Hektoen and Riesman; *Practical Pathology* by Dr. G. Sims Woodhead; and a *Manual of Bacteriology* by Drs. Muir and Ritchie.

The following works are also recommended: Cohnheim, *Lectures on General Pathology*; Thoma, *Handbook of General Pathology*; and Metchnikoff, *Comparative Pathology of Inflammation*.

## II. FORENSIC MEDICINE.

This Professorship was created by the Crown in 1839.

### *Professors.*

1839. Robert Cowan, M.D. | 1841. Harry Rainy, M.D.  
 1872. Pierce Adolphus Simpson, M.A. (Cantab.), M.D.  
 1898. JOHN GLAISTER, M.D., D.P.H. (Camb.), F.C.S., F.R.S.E.

This class will meet daily from 11 to 12 during the summer session.

The Lectures on Forensic Medicine will, as far as possible, elucidate the application of every branch of Medical Science to the purposes of the law.

In the department of Public Health special attention will be given to the subjects of Air, Ventilation and Heating, Water, Injurious Trades, Law respecting Infectious Diseases, Disinfection, Disposal of Sewage and Refuse, and Sanitation in general.

During the session students will have an opportunity of visiting, along with the Professor or his assistant, the most important public institutions and works in the district dealing with Disposal of Sewage and Refuse, Disinfection, Ventilation, etc.

Demonstrations, macroscopic and microscopic, will be given frequently during the session, illustrating, as far as possible, the whole range of Forensic Medicine and Public Health.

Written and oral examinations (attendance at which is compulsory) will be held at intervals.

In addition, facilities will be given for studying Practical Toxicology in the Medico-Legal Laboratory at the University.

*Text-books* (for Class of Medical Jurisprudence and Public Health).—Guy and Ferrier, *Principles of Forensic Medicine*; Dixon Mann, *Manual of Medical Jurisprudence*; Hofmann,

*Atlas of Legal Medicine* (English edition, 1898); Glaister, *Text-book of Forensic Medicine, Toxicology, and Public Health*, 1902; Glaister, *Manual of Public Health for Students, etc.* (2nd edition, 1905).

### PUBLIC HEALTH.

This class will meet four days weekly during the winter session at 12 noon. The lectures will deal with the Sanitation of Dwellings, Medicine in its relation to Public Health, Vital Statistics and Statistical methods, Sanitary Law, etc. (see Ordinance for Degrees in Public Health, p. 265). The subjects under consideration will, as far as possible, be illustrated by demonstrations, visits to public institutions and public health works in Glasgow and neighbourhood, and by other means. The number of meetings of the class is seventy-five. The class is open, after matriculation and payment of the class fee, to Candidates for the Diplomas in Public Health of the Universities of Cambridge, Oxford, and Durham, and of the English, Scottish, and Irish Colleges. According to the Regulations of the General Medical Council, attendance thereat will be accepted in lieu of the second three months' attendance at the office of a recognised Medical Officer of Health for Practical Sanitation.

*Text-books*—Balfour and Lewis, *Manual of Hygiene and Public Health*; Parkes and Kenwood, *Manual of Hygiene and Public Health*; Glaister, *Text-book of Forensic Medicine and Public Health*; Robertson and Porter, *Sanitary Law and Practice*; Hime, *Sanitary Law*; Local Government Board for Scotland, *Instructions, Forms, etc., to Local Authorities*.

**LABORATORY INSTRUCTION IN PUBLIC HEALTH.**—The Public Health Laboratory is under the personal supervision of Professor Glaister and his assistant, and is open from 10 A.M. to 4 P.M., daily, for practical instruction in the methods of analysis of air, water, soils, foods, and the detection of adulterations; and for instruction in practical meteorology, sanitary appliances, physics, and practical bacteriology, in relation to public health.

*Air.*—Estimation of carbonic acid, by Pettenkofer's and other methods; detection and examination of gaseous impurities; estimation of organic impurity by ammonia and

Carnelly's process ; microscopic examination of matters in suspension ; estimation of humidity, dew-point, and tension of vapour.

*Water*.—Qualitative and quantitative analysis ; microscopical examination of sediments ; physical and biological examination ; comparison and estimation of value of filtering media and filters ; mineral and medicinal waters.

*Sewage*.—Effects of purification processes ; analysis of raw sewage and sewage effluents.

*Soils*.—Chemical and physical examination.

*Foods*.—Analysis and detection of adulterants ; microscopic examination of food-stuffs ; physical, microscopical, and chemical examination of milk ; analysis of milk, cream, butter, cheese, and oils used as foods ; microscopical examination and chemical analysis of starchy foods, sugars, tea, coffee, cocoa, pepper, etc. ; examination of preserved foods and detection of their adulterations.

*Disinfectants*. Their valuation and comparison ; examination of pigments in articles of attire, wall-papers, and those used in trade.

*Bacteriology*.—Methods of investigation, cultivation, and transmission ; preparation of culture media ; bacteriological examination of air, water, foods, blood, earth, etc. ; microphotographic processes.

*Microscopy*.—Examination of food substances ; parasites—animal and vegetable ; crystalline deposits ; micro-organisms.

*Meteorological Instruments*.—Barometer, thermometers, different kinds ; rain gauges ; anemometers and manometers ; hygrometers, and the different forms of these instruments.

The Laboratory is furnished with all the necessary chemical apparatus, etc., required for analysis, and each worker is furnished with a set of apparatus for personally doing the work, and for which he is held personally responsible.

There is a complete collection of model sanitary appliances, including traps ; soil stacks ; soil pipes ; ventilators ; meteorological instruments ; and an abundant collection of drawings, diagrams, and illustrative tables.



The Laboratory also possesses a large collection of microscopic specimens illustrative of parasites—animal and vegetable—food characteristics, of bacteriology and of tropical diseases.

Visits will be made, as arranged, during the Session, to view and inspect modes of disposal of refuse, sewage disposal, unhealthy trades, etc.

The Laboratory instruction is recognized for the Diplomas in Public Health of the Triple Scotch Colleges, of the English Colleges, and of the Universities of Cambridge, Oxford, and Durham, under the new regulations.

*Text-books* (for Public Health Laboratory). — Lehmann, *Methods of Practical Hygiene* (English edition), 2 vols.; Parkes, *Public Health Laboratory Work*; Pakes, *Public Health Laboratory Work*; Hewlett, *Manual of Bacteriology*, 1898; Muir and Ritchie, *Manual of Bacteriology*, 1903; Slater and Spitta, *Atlas of Bacteriology*, 1898.

N.B.—(See under *Faculty of Law*, p. 136.)

**D.** The subjects of the *Final Professional Examination* for the Degrees of Bachelor of Medicine and Bachelor of Surgery are taught in the following classes:—

#### I. SURGERY.

This Professorship was founded in 1815, and is in the gift of the Crown.

##### *Professors.*

1815. John Burns, M.D.	1860. Joseph Lister, M.B., F.R.S.
1850. James A. Lawrie, M.D.	1869. Sir George H. B. Macleod, M.D., LL.D., F.R.S.E.
1892. SIR WILLIAM MACEWEN, F.R.S.	

The Professor delivers during winter a course consisting of systematic lectures, illustrated by diagrams, casts, and pathological preparations, and of frequent demonstrations. There are three written examinations. The following is a general outline of the course:—Anaesthesia; wounds and their varieties;

haemorrhage and its arrest; the phenomena of destruction and repair of tissues; inflammation; surgical bacteriology; infective processes and diseases dependent upon bacteria and their products; neoplasms; injuries, including fractures and dislocations; Regional Surgery.

During summer Operative Surgery is conducted daily, and consists of descriptive instruction by the Professor in the principal operations, and the performance of recognised operations by the students under supervision.

In the course of Clinical Surgery which the Professor conducts both winter and summer at the Western Infirmary, as part of the regular Clinical Instruction given to University students, practical instruction is given in the methods of clinical observation, surgical diagnosis and treatment. The Professor also takes occasion, as far as the material is available, to draw the attention of the students to the points illustrative of the principles taught in the systematic course.

## II. CLINICAL SURGERY.

This Professorship was founded by the University in May, 1874. The Professor is appointed by the University Court.

### *Professors.*

1874. George Buchanan, M.A., M.D., LL.D.

1900. SIR HECTOR C. CAMERON, M.D., C.M.

### *Assistant.*

Alfred A. Young, M.A., M.B., C.M.

The Professor teaches Clinical Surgery by "Lectures and other instruction" on the cases of patients affected with injuries, diseases, etc., requiring Surgical treatment.

The class meets daily at 9.15 A.M., both in the summer and winter session, in the Western Infirmary—Wards XXIX. and XXX. (new wing).

## III. PRACTICE OF MEDICINE.

This Professorship, created in 1637, but long suppressed for want of revenue, was revived by the College in 1712, and

endowed by Queen Anne in the following year. It is in the gift of the Crown.

*Professors.*

1714. John Johnstoun, M.D.	1827. Charles Badham, M.D.
1751. William Cullen, M.D.	1841. William Thomson, M.D.
1756. Robert Hamilton, M.D.	1852. John M <sup>r</sup> Farlane, M.D.
1757. Joseph Black, M.D.	1862. Sir W. T. Gairdner,
1766. Alex. Stevenson, M.D.	K.C.B., M.D., LL.D., F.R.S.
1789. Thomas C. Hope, M.D.	1900. SIR THOMAS M <sup>c</sup> CALL
1796. Robert Freer, M.D.	ANDERSON, M.D.

The course is directed to the exposition of the Healing Art in its more practical aspects, having regard to the immensely wide range of diseases usually assigned to the physician and the general practitioner, as opposed to the surgeon and the specialist. The general principles and doctrines which are available at the bedside of the sick are each year carefully and thoroughly considered in connection with such a number and variety of illustrative instances as may be expected to leave a lasting and vivid impression of the essentials of Diagnosis, Prognosis, and Treatment, in so far as these can be advantageously delivered in the form of lectures guided by a systematic plan, conveying not only the opinions of the Professor, but also references to the general history of opinion, and the steps by which the existing knowledge of disease has been built up. Thus, a broad and sufficient basis is obtained for conveying an insight into what may now be regarded as settled medical doctrine, and also, as regards points which cannot be so considered, suggestions as to the direction in which we may reasonably look for guidance in the future. But no attempt is made to give a complete synopsis annually of the details of practice in all departments; for this, the student is of necessity referred to one or other of the current text-books. In summer there is a tutorial class twice a week, open, without fee, to those who have attended the Practice of Medicine class in a previous winter session.

The Professor conducts at the Western Infirmary, both in winter and in summer, part of the regular Clinical Instruction given to the Medical Students of the University.

Tutorial Instruction is carried out by the University Assistants twice a week in the University and three times a week in the Western Infirmary, and several written examina-

tions are held in the course of the winter session. Medals and certificates of distinction are determined upon the basis of these examinations.

A portrait-medal of Sir William T. Gairdner, K.C.B., is awarded to the most distinguished student in the class of Practice of Medicine. The dies for this medal were presented to the University along with a Portrait of the Professor by his former students, on 28th January, 1893.

*Text-books.*—One of the following is recommended for general use:—Frederick Taylor, *Manual of the Practice of Medicine*; Osler, *Principles and Practice of Medicine*; *A Text-book of Medical Practice*, edited by William Bain, M.D.; Hilton Fagge's *Principles and Practice of Medicine* is a larger work of great excellence, specially adapted for senior students. Of smaller works the second edition of Wheeler's *Handbook of Medicine*, edited by Dr. William R. Jack, is useful for junior students. Finlayson's *Clinical Manual* is in very general use for hospital work, and Professor Anderson's *Contributions to Clinical Medicine* may be consulted.

#### IV. CLINICAL MEDICINE.

This Professorship was founded by the University in May, 1874. The Professor is appointed by the University Court.

##### *Professors.*

1874. Thomas McCall Anderson, M.D.

1900. SAMSON GEMMELL, M.D.

##### *Assistant.*

James C. McClure, M.B., C.M.

The class meets five days a week during the winter and summer sessions, and three or four written examinations are held. On Mondays and Thursdays the Professor gives demonstrations of cases in the wards; and on Wednesdays there is a clinical lecture in the theatre on cases under observation. The clinical tutors meet the class (in sections) on Tuesdays and Fridays for instruction in the investigation of cases and in the use of instruments and apparatus. A ward visit is made by the Professor every day at the close of the regular instruction.

## V. MIDWIFERY.

This subject was originally taught as part of the course in Anatomy, but in 1790 the Faculty of the College appointed Mr. James Towers to be Lecturer in Midwifery, and in 1792 assigned him a salary out of the Walton Fund. In 1815 the Chair was founded by George III., and Mr. Towers became the first Professor. The Crown is the Patron.

*Professors.*

1815. James Towers, C.M.	1834. William Cummin, M.D.
1820. John Towers, C.M.	1840. John M. Pagan, M.D.
1833. Robert Lee, M.D.	1868. William Leishman, M.D.
1894. MURDOCH CAMERON, M.D.	

The Lectures embrace the Theory and Practice of Midwifery and the Diseases of Children. The Professor was Physician to the University Lying-in Hospital and Dispensary, an institution which was many years ago established in the neighbourhood of the old College. The altered circumstances of the school having, however, rendered this situation unavailable for Clinical instruction, other arrangements have now been made by which the Managers of the Western Infirmary have placed a ward for the Diseases of Women under the charge of the Professor. Ample opportunity is afforded for Clinical instruction in Midwifery at the Glasgow Maternity Hospital, to which the Professor holds the appointment of Consulting Physician.

A course of lectures on the Diseases of Women is delivered in summer.

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E. Candidates for the Degrees of Bachelor of Medicine and Bachelor of Surgery are required also to attend the following courses :—

## I. INSANITY.

This Lectureship was instituted by the University in 1880. Great advantages are offered to students for the study of this subject, the Lecturer being Physician Superintendent to the Royal Asylum, Gartnavel.

*Lecturer.*

1880. David Yellowlees, M.D., LL.D.  
1905. LANDEL R. OSWALD, M.B.

A course of Lectures is given in the University at 12 noon on Wednesdays during the summer session, and Clinical Instruction at the Asylum, Gartnavel, at 10 A.M. on Saturdays.

*For the Mackintosh Mental Science Bursary in connection with this class see "Bursaries."*

## II. OPHTHALMOLOGY.

The practical course of instruction in Ophthalmology must consist of not less than twenty meetings, of which six may be class-room lectures, and the others shall be for clinical instruction. Such courses are available in the Glasgow Eye Infirmary (174 Berkeley Street and 80 Charlotte Street), and in the Glasgow Ophthalmic Institution (126 West Regent Street). In the Berkeley Street branch of the Eye Infirmary attendance is given daily at 1 P.M. and students may attend twice a week the lectures and the clinique of any of the three surgeons. The same rule holds in the Charlotte Street branch. At the Ophthalmic Institution lectures are delivered during the summer session every Monday at 4 P.M., and practical instruction is given on Tuesday and Friday at 2 P.M. In the case of women students lectures are delivered in the summer session by Dr. A. Maitland Ramsay, in Queen Margaret College every Tuesday and Friday at 4 P.M., and practical instruction is given at the Ophthalmic Institution every Monday and Thursday at 2 P.M.

## III. FEVERS.

The course of Clinical Instruction in Fevers must consist of at least ten meetings in a hospital for infectious diseases containing not less than fifty beds. Such instruction is given in the City of Glasgow Fever Hospital, Belvidere. Each student must, before commencing attendance at the Hospital, obtain at the office of Mr. James D. Borthwick, Treasurer, Police Department, 285 George Street, an admission card—Fee, £1 1s.

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F. Candidates for the Degrees of Bachelor of Medicine and Bachelor of Surgery are also recommended to attend the following courses :—

### I. DISEASES OF THE EAR.

This Lectureship was instituted by the University Court in 1895.

*Lecturer.*

1895. THOMAS BARR, M.D.

Short courses on Diseases of the Ear are conducted in both winter and summer. They are of a practical character, and arrangements are made so that each student who takes the course may, in accordance with the recommendation of the Senate under Ordinance No. 14, Section VII., 10 B, attend at least ten meetings for practical instruction. At these meetings the students are taught how to examine and treat Ear Disease, while illustrative cases are regularly demonstrated. In connection with each course a certain number of lectures are delivered in the University. The practical work is carried on at the Glasgow Ear Hospital or Western Infirmary on days and hours to suit as far as possible the convenience of students. As it is not considered desirable that there should be an elaborate or complete course of systematic lectures on this subject, it is understood that a suitable book on Diseases of the Ear should be studied by the student while attending the practical course. It will be arranged that those who are desirous of pursuing the subject further may receive more advanced practical instruction in a second course.

Prizes will be awarded to the most proficient students as tested by clinical examination.

*Text-book.*—*Manual of Diseases of the Ear* (3rd Edition, 1901), by Thomas Barr, M.D.

## II. DISEASES OF THE THROAT AND NOSE.

This Lectureship was instituted by the University Court in 1895.

*Lecturer.*

1895. JAMES WALKER DOWNIE, M.B., F.F.P. and S.G.

The course of instruction on Diseases of the Throat and Nose is clinical in character, and is conducted in conformity with the recommendation of the Senate under Ordinance No. 14, Section VII., Sub-section 10 B, according to which candidates for graduation in Medicine are recommended to attend a short practical course of ten meetings on this subject. To permit of the necessary sub-division of the class for purposes of practical instruction there is a winter and a summer course, each having about the same number of meetings.

At the beginning of each session, the class meets as a whole at the University on Thursdays at 4 P.M. There the methods of examining the throat and nose, and the apparatus necessary for this purpose, are described and explained: the appearance of the parts in health and as altered by disease is described, as are also the means of treatment, etc.

The class is then divided into sections for practical instruction. These sectional meetings are held at the Western Infirmary (Throat and Nose Department)—one section on Tuesdays, another on Fridays, at 4 P.M. At these meetings each student is afforded every facility for examining the various patients for himself under the supervision of the Lecturer.

In the Lectures at the University fuller instruction than can be communicated in the presence of the patient regarding pathological conditions seen at the Infirmary is given, and these lectures are illustrated by casts and diagrams, stereoscopic photographs and lantern slides, instruments, anatomical and pathological specimens, etc. While regular attendance on the practical instruction at the Infirmary is necessary to obtain a certificate, all members of the class are strongly recommended also to attend the meetings at the University with regularity.

*Text-books.*—*Clinical Manual of Diseases of the Throat*, by J. Walker Downie, M.B. ; *A Handbook of Diseases of the Nose*, by James B. Ball, M.D.

### III. DISEASES OF THE SKIN.

The course of instruction on Diseases of the Skin at the Hospital for Skin Diseases is of a thoroughly practical character, and is conducted by Professor Sir Thomas M'Call Anderson during the summer session. Arrangements have been made to supply short practical courses in accordance with the recommendation of the Senate under Ordinance No. 14, Section VII, Sub-section 10. The course commences on Monday, 27th April, 1908.

### IV. DISEASES OF CHILDREN.

Arrangements will be made for enabling students to carry out the recommendation of the Senate, that each candidate for Degrees in Medicine should attend a short practical course on this subject.



## IV.—FACULTY OF LAW.

The Faculty of Law embraces the Chairs of Law and Conveyancing, and also the Chairs of Forensic Medicine and Political Economy. In this Faculty there are also Lectureships on Civil or Roman Law, Constitutional Law and History, Jurisprudence, Public International Law, International Private Law, Mercantile Law, and Evidence and Procedure.

For the information of students proposing to enter the legal profession, whether as Advocates or as Law Agents, it may be stated that by the regulations of the Faculty of Advocates, every intrant to the Faculty is required to produce evidence of being duly qualified (1) in General Scholarship, and (2) in Law. In General Scholarship the possession of any one of certain University degrees, including the degree of M.A. from a Scottish University, is deemed a sufficient qualification. If the intrant does not hold a qualifying degree he is required to undergo an examination in certain specified branches of General Scholarship, as to which information may be obtained on application to the Clerk of Intrants to the Faculty. On the expiration of a year after the intrant has been found qualified in General Scholarship, his examination in Law may be proceeded with, subject to these conditions: (1) That he shall not during the year before such examination have engaged in any trade, business, or profession, either on his own account, or as assistant to or in the employment of another; and (2) that he shall produce evidence of attendance, such as is required for admission to examination for a Law degree, in a class of Scots Law and a class of Conveyancing, in a Scottish University, and evidence of the like attendance in a class of (*a*) Civil Law, (*b*) Philosophy of Law and International Law, Public or Private, (*c*) Constitutional Law and History in a Scottish University, or such attendance in another University or School of Law as may seem to the Dean and his Council to be equivalent thereto, and (*d*) Medical Jurisprudence, in a University, or in a School recognised as qualifying for University Degrees. On the production by the intrant of evidence of his having attended the necessary classes (which he may attend in any order he thinks fit), he is examined on (1) Civil Law, (2) Philosophy of Law and International Law, Public or Private, (3) Constitutional Law and History, (4) Medical Jurisprudence,

(5) Scots Law, Civil and Criminal, including Procedure, (6) Conveyancing. Information as to the books prescribed may be obtained from the Clerk of Intrans. If, however, the intrans has obtained the degree of LL.B. from a Scottish University after examination in all the subjects above prescribed for examination in Law, and also produces evidence that he has passed an examination in Procedure, he is held qualified in General Scholarship and Law without examination or other evidence of qualification, subject to the conditions that during the year immediately before presenting his diploma to the Examiners, he shall not have been engaged in any trade, business, or profession, as above set forth, and that he shall have duly presented his petition for admission and appeared before the Examiners prior to the commencement of such year. If the intrans has obtained said degree of LL.B. after passing examinations in one or more of the said subjects he is exempt from examination in these subjects. He must pass in at least two of the subjects at one time. The regulations regarding the "Public Examination," which all intrans, whether graduates or not, must undergo, require that the intrans shall write a Thesis on a Title of the Pandects assigned to him by the Dean, and shall defend it on its being impugned. The question as to the intrans's admission is then decided by the Faculty voting by ballot.

Admission to the profession of a Law Agent is regulated by the Law Agents Act, 1873, and by the Law Agents and Notaries Public Act, 1891, and relative Acts of Sederunt of the Court of Session, prescribing rules as to subjects of examination and certain conditions of admission. Information as to the subjects of examination may be obtained from the Clerk to the Examiners. The former Act requires in general that every applicant for admission must have served an apprenticeship of five years with a practising law-agent or with a sheriff-clerk in office at the passing of the Act, which apprenticeship, if entered upon after the passing of the Act, must be served under indenture, recorded and intimated as the Act requires. In certain cases, however, an apprenticeship for three years is allowed as sufficient, the excepted cases including that of a person holding a degree in Law or in Arts of a University in Great Britain or Ireland granted after examination.

The Act of Sederunt of 18th March, 1893, institutes two examinations in General Knowledge, and prescribes the subjects of these examinations and of the examination in Law. By the Act of Sederunt of 21st November, 1902, in any subject to which the certificates or passes apply a Higher or Lower Grade Leaving Certificate issued prior to 1st June, 1902, or a Leaving Certificate or an Intermediate Certificate issued subsequent to that date, or a Pass in either Higher or Lower Grade granted as a step towards a Leaving Certificate, exempts from the first examination in General Knowledge; and a Higher Grade Leaving Certificate issued prior to 1st June, 1902, or a Leaving Certificate issued subsequent to that date, so far as obtained by passing on the Higher Grade, or a Pass in the Higher Grade granted as a step towards a Leaving Certificate, exempts from the second examination. Higher or Lower Certificates of the Oxford and Cambridge Schools Examination Board afford similar exemptions to Higher or Lower Grade Leaving Certificates. Higher Standard Certificates in the Preliminary Examination for M.A. under Ordinance No. 11 exempt from both of these examinations, but an examination in Book-keeping must be passed. A Lower Standard Certificate in the Preliminary Examination for M.A. under Ordinance No. 11 exempts from the first examination in General Knowledge in any subject to which that Certificate applies, and a Higher Standard Certificate exempts similarly from the second examination in General Knowledge. Certificates entitling to exemption from the first examination must be presented to the Clerk of the Board of Examiners of Law Agents before the commencement of apprenticeship. A candidate for admission as Law Agent is exempted from any examination in General Knowledge, including book-keeping, if (*inter alia*) he hold a Degree of any University in the United Kingdom granted after examination. By Act of Sederunt, 18th March, 1893, a candidate who holds the degree of LL.B. or B.L. of any Scottish University is exempted from any examination in Law, excepting only on Forms of Process, Civil and Criminal. But an Act of Sederunt of 23rd December, 1904, provides that a candidate who holds the Degree of LL.B. or B.L. of any Scottish University who has not passed in the Law of Scotland and Conveyancing, or either of them, for his

Degree shall be required to pass a qualifying examination in the omitted subject or subjects to the satisfaction of the Examiners of Law Agents.

The Act of Sederunt dated 11th July, 1899, provides *inter alia*:—(1) The first examination in general knowledge shall be taken before the commencement of apprenticeship, and no person shall be admitted as apprentice under indenture to a Law Agent until he shall have passed the said first examination. (2) The second examination in general knowledge may be taken at any time after the candidate has passed the first examination. (3) A candidate who fails to pass the first or second examination may again offer himself for examination, and shall be re-examined in all the subjects, or such part thereof as the examiners may determine. It shall be in the power of the examiners to fix a time before which a candidate who has failed to pass any examination shall not present himself again for examination. (4) No candidate shall be examined in Law until he has passed the second examination in General Knowledge.

For Regulations as to Graduation in Law, see Index.

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### LAW.

This Professorship is in the gift of the Crown. After being long in abeyance for want of revenue, it was revived by the College in 1712, and endowed by Queen Anne in the following year.

#### *Professors.*

1714. Wm. Forbes, Advocate.	1855. Geo. Skene, Advocate.
1746. Wm. Cross, Advocate.	1867. Robert Berry, M.A.,
1750. Hercules Lindsay, LL.D.	LL.D., Advocate.
1761. John Millar, Advocate.	1887. Alex. Moody Stuart,
1801. R. Davidson, Advocate.	LL.D., Advocate.
1842. Allan A. Maconochie,	1905. WILLIAM M. GLOAG,
Advocate.	B.A., Advocate.

SCOTS LAW.<sup>1</sup>—The course extends to about 100 Lectures, embracing as full a course of Scots Law in each session as the time will permit, and including, so far as practicable, Lectures on the following subjects:—Sources and Development of the Law

<sup>1</sup> Students taking the curriculum for Graduation in Law are strongly recommended to take the Classes of Civil Law, Scots Law, and Conveyancing in separate sessions, and to take them in this order.

of Scotland; Law of Personal and Domestic relations—Marriage—Parent and Child—Succession—Trusts; Law of Property—Landownership—Patents—Copyright; the Law of Obligations and Contracts generally, their Constitution and Extinction, Legality and Illegality—the Law of Sale—Retention and Lien—Loan; Deposit—Pledge—Hiring, and the Law of Master and Servant—Agency—Law of Carriers and Affreightment—Partnership—Cautionary Obligations; Law of Landlord and Tenant; Law of Reparation—Personal injury—Defamation; Law of Diligence and Bankruptcy; Criminal Law, etc.

The text-book recommended to students is Erskine's *Principles of the Law of Scotland* (nineteenth edition).

The class meets five days a week—viz., every day except Monday, from 8 to 9 A.M. At intervals throughout the session the hour is devoted to the ordinary class examinations, which are conducted in writing.

Three Prizes are given by the University for proficiency in the class examinations; and the "Robert Ross Prize," being the free annual income of a sum of £500 bequeathed by the late Robert Ross, Esq., writer, Glasgow, is awarded in equal portions to the head students of the year in this class and in the class of Conveyancing. Prizes are also given by the Faculty of Procurators, generally for distinction in a special written examination towards the end of the session.

*As to the Andrew Cunningham Bursary and the Robert Macfarlane Bursary, see Index.*

### CONVEYANCING.<sup>1</sup>

" This Chair was instituted by ordinance of the Universities Commission (1858) of date 15th June, 1861, which was approved by Her Majesty Queen Victoria in Council on 11th October, 1861. The right of appointment to the Chair is vested in the Dean and Council of the Faculty of Procurators, Glasgow.

#### *Professors.*

1862. Anderson Kirkwood, LL.D.

1867. Sir James Robertson, LL.D.

1889. JAMES MOIR, LL.D., Member of the Faculty of Procurators, Glasgow.

The course extends to about 100 Lectures, and during the

<sup>1</sup> See note at foot of page 134.

session there are both oral and written examinations. As full a course of Conveyancing is given each session as the time permits. The subjects treated will be selected from the following list, viz. : (1) Introductory and Preliminary Lectures. (2) The Feudal and Burgage System, the constitution of Feudal and Burgage Rights, and the transmission thereof by Deeds *inter vivos*, or by Judicial Acts. (3) Heritable Securities. (4) Leases. (5) Marriage Contracts, Bonds of Provision, Testamentary Deeds and Deeds of Entail. (6) The completion of Titles, in case of death, to Heritable and Moveable Estate.

The class meets every day, except Monday, from 8 to 9 A.M.

The text-books recommended are Duff's *Feudal Rights*, with Supplement; *Lectures on Conveyancing*, by Menzies; *Lectures on Conveyancing*, by A. M. Bell; and Craigie's *Statutes*.

Prizes are given for eminence in the class examinations during the session. Prizes are also given by the Faculty of Procurators for distinction in a written examination held towards the end of the session on some of the subjects of the course; and the "Robert Ross Prize," being the free annual income of a sum of £500 bequeathed by the late Robert Ross, Esq., writer, Glasgow, is awarded in equal portions to the head students of the year in this class and in the class of Scots Law.

As to the Andrew Cunningham Bursary and the Robert Macfarlane Bursary, see *Index*.

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### FORENSIC MEDICINE.

This Professorship was created by the Crown in 1839.

#### *Professors.*

1839. Robert Cowan, M.D. | 1841. Harry Rainy, M.D.

1872. Pierce Adolphus Simpson, M.A. (Cantab.), M.D.

1898. JOHN GLAISTER, M.D., D.P.H. (Camb.), F.C.S., F.R.S.E.

This course, qualifying for graduation in Law (B.L. and LL.B.), will be delivered during the winter session at 9 A.M., after the Christmas vacation.

*Text-books.*—Gny and Ferrier, *Principles of Forensic Medicine*; Dixon Mann, *Manual of Medical Jurisprudence*; Glaister, *Text-book of Forensic Medicine*, etc., 1902.

(See under Faculty of Medicine, p. 120.)

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### POLITICAL ECONOMY.

(See under Faculty of Arts, p. 83.)

CIVIL LAW.<sup>1</sup>

The study of Civil Law in Glasgow is coeval with the establishment of the University. In the University Annals it is recorded that, in 1460, lectures on the Civil Law were delivered in the Chapter-House of the Friars Predicators by Master William of Levenax (Lennox). After being for a considerable period in abeyance, the study of the subject was revived in 1712. In the middle of the eighteenth century the lectures were for the first time delivered in English; up to that time the prelections were in Latin. For some years during last century the lectures were once more in abeyance, but in session 1873-74 a class was again formed, and was taught in alternate sessions by the Professor of Law. In 1894 the University Court, carrying out a recommendation of the Universities Commission (1876), instituted a separate Lectureship in the subject.

*Lecturer.*

1895. J. M. IRVINE, LL.B., Advocate.

The course extends to eighty lectures. The first part of the course will deal with the Constitutional History of Rome and the history of the development of the law. This part is intended to serve as an introduction to the study of the special departments of the law. The latter part of the course will be devoted to a systematic exposition, in detail, of the various departments of the law, according to the order in which they are treated in Justinian's *Institutes*. The class meets four days a week during the winter session, from 5.30 to 6.30 P.M. Attendance at the class is required of all candidates for Degrees in Law (LL.B. and B.L.); it also qualifies for the Degree of M.A.

HONOURS IN ECONOMIC SCIENCE.—The lectures in the class of Civil Law up to Christmas, together with about twelve additional lectures given after Christmas separately from the ordinary course on Civil Law, constitute a half course on the History of Civil Law qualifying for the Degree of M.A. with Honours in Economic Science.<sup>2</sup> The additional lectures will deal with the history of Civil Law after the time of Justinian and with the influence of the Civil Law in the development of modern law and existing institutions.

*Text-book.*—*Institutes of Justinian*; Ed., Moyle or Sandars.

<sup>1</sup> See note at foot of page 134.

<sup>2</sup> See fifth note on p. 224.

Reference is also frequently made to *Institutes of Gaius*; Ed., Poste or Muirhead.

*History of Civil Law.*—The text-books recommended for students taking the half course in History of Civil Law are Ortolan, *Histoire de la Législation Romaine* (English translation by Cutler); Taylor, *Constitutional History of Rome* (Lond. 1899); Bury, *History of the Later Roman Empire* (Lond. 1889).

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### CONSTITUTIONAL LAW AND HISTORY.

This Lectureship was instituted by the University in 1878, and the class was taught in alternate years during the summer session, the course extending to forty lectures. In 1894 the University Court, to meet the requirements of the Ordinances for Graduation in Law, placed the Lectureship upon a new footing. The course was extended to eighty lectures, and the class was made a Winter Class, meeting every year. In April, 1900, arrangements were made for extending the course to a hundred meetings for Arts students, and the extended course was recognized as a full course in Arts, qualifying for graduation for the ordinary Degree of M.A., and also for the Degree of M.A. with Honours in History. Attendance on the first eighty lectures of the course is required of all candidates for the Degree of Bachelor of Laws (LL.B.). Attendance on the first fifty lectures of the course qualifies for the Degree of B.L., subject to the conditions laid down in Ordinance No. 40.

#### *Lecturers.*

- 1878. Charles S. Dickson, M.A., Advocate.
- 1878. Alex. Ure, LL.B., Advocate.
- 1889. Robert T. Younger, LL.B., Advocate.
- 1894. WILLIAM S. McKECHNIE, LL.B., D.Phil.

ORDINARY CLASS.—The course will be partly historical and partly analytical. The historical lectures will trace in outline the development of the Constitution from the Anglo-Saxon migrations to the present reign. The analytical lectures will treat (1) of the safeguards of the rights of individuals, and (2) of the separate parts of the Constitution and the distribution of power in the State.

The text-books are Taswell-Langmead, *Constitutional History*; Dicey, *Law of the Constitution*; and Thomas, *Leading*



*Cases in Constitutional Law.* In addition, students are recommended to refer to Anson, *Law and Custom of the Constitution*; McKechnie, *Magna Carta*; and Bagehot, *English Constitution*.

The hour for the meeting of the class is 4.30 P.M.

HONOURS CLASS.—(See under Faculty of Arts, p. 92.)

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### GENERAL OR COMPARATIVE JURISPRUDENCE.

This Lectureship was instituted by the University in 1893, under the title Philosophy of Law. The subject was at an early date treated as an integral part of the course of Moral Philosophy, under the name of Natural Jurisprudence. From 1878 it was treated by the Lecturer on Public Law as introductory to that subject.

#### *Lecturers.*

1893. William Galbraith Miller, LL.B.

1904. JAMES A. McCALLUM, LL.B.

The course is given on Mondays, Wednesdays, and Fridays during the winter session. The lectures for 1907-8 will be mainly devoted to the analysis of fundamental legal conceptions and legal classification, the development of law and legal conceptions, and the metaphysic of law. Written exercises will be prescribed. The same course under the name of Philosophy of Law may in a special case be reckoned as a half course for the Degree of M.A. by candidates for honours in Economic Science (see p. 224).

The class meets at 4.30 P.M. in the Faculty Hall, St. George's Place.

*Text-books.*—Holland, *Jurisprudence*; Maine, *Ancient Law*; Kant, *Philosophy of Law* (Hastie's translation).

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### THE LAW OF NATIONS, OR PUBLIC INTERNATIONAL LAW.

In 1878 the University instituted a Lectureship on Public Law. In 1894 the University Court, to meet the requirements of the ordinances for graduation in Law, created separate courses for International Private Law and for Jurisprudence.

*Lecturers.*

1878. William Galbraith Miller, LL.B.

1904. A. H. CHARTERIS, LL.B.

The course is given on Mondays, Wednesdays, and Fridays during the winter session. The course for 1907-8 will deal with the relations of States in peace, and in greater detail with their relations in war, including the subject of neutrality. Written exercises will be prescribed. Students are expected to be acquainted with the elements of the Civil Law, and to have a general acquaintance with Modern European History.

*Text-books.*—Hall, *International Law* (5th ed.), or Lawrence, *International Law*. The cases referred to in the lectures should be studied in the collections edited by Pitt Cobbett or Scott.

The class meets at 5.30 P.M. in the Faculty Hall, St. George's Place.

## INTERNATIONAL PRIVATE LAW.

From 1878 this subject was treated as part of the course of Public Law. In 1894 the University Court, to meet the requirements of the ordinances for graduation in Law, instituted a Lectureship on International Private Law.

*Lecturers.*

1894. William Galbraith Miller, LL.B.

1904. A. H. CHARTERIS, LL.B.

This course is given in the summer session. The lectures discuss the principal doctrines as developed in the decisions of the British Courts compared with the results of Continental Jurisprudence. The subjects comprise History, General Principles, Comity, Public Interest, Nationality and Domicil; and in different sessions some of the following in detail: (1) Marriage, Divorce, Guardianship, and Family Law; (2) Contract, Delict, and Mercantile Law, including Bankruptcy; (3) Succession and Trust Law, Conveyancing and Heritable Rights; (4) Copyright, Trademarks, etc.; (5) Procedure and Evidence; (6) Criminal Law and Extradition; the other subjects being sketched in outline. For purposes of comparison and illustration reference is made to the collections of foreign codes, and to the *Journal de droit international privé*, edited by M. Clunet, all of which will be found in the Library of the Faculty of Procurators. Students are expected to be familiar with the

leading doctrines of the Civil Law and of Scots Law. The class meets five days a week at 8.45 A.M. in the Faculty Hall, St. George's Place.

*Text-book.*—Rattigan, *Private International Law*. Students are expected to study the Statutes referred to, and certain leading cases prescribed, of which useful collections will be found in Nelson's *Private International Law*, Campbell's *Ruling Cases* (Domicil and Conflict of Laws), Beale's *Cases on the Conflict of Laws*. Dicey's *Conflict of Laws* and Westlake's *Private International Law* (4th ed.), will be found useful for reference.

### MERCANTILE LAW.

This Lectureship was instituted by the University in 1894.

#### *Lecturers.*

1894. James Mackenzie, Member of the Faculty of Procurators, Glasgow.

1900. WILLIAM SHAW, Member of the Faculty of Procurators, Glasgow.

This course will extend to eighty lectures, and will embrace for the first half course the following subjects:—The Law of Contracts, including Retention, Pledge, the Factors Acts, Loan, Bankruptcy and Sequestration, Judicial Factors, Bills of Exchange, and Banking. The second half course will include the Law of Partnership, Joint Stock Companies; Maritime Law, including Affreightment, Lien, and Average; and Marine, Fire, Life, and Accident Insurance. Attendance on the whole course may, subject to the conditions laid down in Ordinance No. 39, be reckoned as qualifying for the Degree of LL.B.; and attendance on forty lectures, constituting a half course, may, subject to the conditions laid down in Ordinance No. 40, be reckoned as qualifying for the Degree of B.L. The principal subjects in the first half course have been prepared with special reference to the requirements of students intending to follow the profession of Accountants or Bankers. The class meets at 5.30 P.M.

### EVIDENCE AND PROCEDURE.

This Lectureship was instituted by the University in 1905.

*Lecturer*—ROBERT LAMOND, LL.B., Member of the Faculty of Procurators, Glasgow.

The course of forty lectures will describe the principles of the Law of Evidence and the relevancy and kinds of evidence.

It will also include a description of the various Courts, the nature of their civil and criminal jurisdiction, the actions and proceedings competent in each and the Procedure followed.

The lectures are delivered on four or five days of the week at 8.45 A.M. during the Summer Session in the Faculty Hall, St. George's Place.

*Text-books.*—Mackay, *Manual of Court of Session Practice*; Dove Wilson, *Sheriff Court Practice in Civil Causes*; Macdonald, *Criminal Law and Criminal Procedure (Scotland) Act, 1887*; Dickson on *Evidence*. Reference will also be made to Statutes and leading cases bearing on the subjects dealt with.

## FACULTY OF THEOLOGY.

The Faculty of Theology embraces the four classes of Divinity, Hebrew and Semitic Languages, Ecclesiastical History, and Divinity and Biblical Criticism.

The following regulations are applicable to students preparing for the ministry of the Church of Scotland. Under the Act of General Assembly, 1883, consolidating the Acts presently in force in regard to the study of Divinity, all candidates for the ministry are required to attend at the Divinity Hall either three full and regular sessions, or two full and regular sessions and three partial sessions; and to give at least two full sessions of regular attendance on the classes of Church History, Hebrew, and Biblical Criticism.

The following conspectus shows the order in which the classes should be taken:

### FIRST YEAR.

9 a.m.,	Mon.,	Wed.,	Fri.,	-	-	New Testament Greek.
10 a.m.,	daily,	-	-	-	-	Hebrew.
11 a.m.,	daily,	-	-	-	-	Church History.
12 noon,	daily,	-	-	-	-	Divinity.

### SECOND YEAR.

9 a.m.,	daily,	-	-	-	Hebrew.	
10 a.m.,	daily,	-	-	-	Biblical Criticism.	
11 a.m.,	daily,	-	-	-	Divinity.	
12 noon,	Tu.,	Wed.,	Th.,	-	-	Honours Hebrew.

## THIRD YEAR.

9 a.m.,	Mon.,	Wed.,	Fri.,	-	-	New Testament Greek.
10 a.m.,	daily,	-	-	-	-	Biblical Criticism.
11 a.m.,	daily,	-	-	-	-	Divinity.
12 noon,	daily,	-	-	-	-	Church History.

Each student, in order to be enrolled *for the first year* of his attendance, must present to the Professor of Divinity, *first*, a certificate from the Presbytery within the bounds of which he usually resides, and by which he has been examined on his knowledge of the Holy Scriptures according to the authorized version, and of the Catechetical Standards of the Church; *secondly*, a certificate signed by the Convener or Vice-Convener of the Examining Board appointed by the General Assembly to conduct the examination of students previous to their entering the Divinity Hall.<sup>1</sup> In order to be admitted to this examination he must, in accordance with the Act of Assembly, 1896, produce, in addition to the certificate from the Presbytery recommending him, either (a) the diploma of a Master of Arts of a Scottish University, or the diploma of a Bachelor of Arts after an undergraduate course at any British or Irish University, or at any Colonial University at which the course is equivalent to that of a Scottish University, and which shall be approved by the General Assembly on a report from the Committee on the admission of ministers and the status of students of Divinity, or evidence that he has passed the examinations for, and is entitled to receive, such diploma of Master or Bachelor of Arts; or (b) evidence that he has passed the Preliminary Examination required of those proceeding to the Degree of Master of Arts in a Scottish University, or such examination as the University authorities recognize as equivalent thereto,

<sup>1</sup> The following are the subjects of examination for October, 1907: LATIN—Livy, Book V.; Horace, *Ars Poetica*; Prose Composition and translation of unseen passages. GREEK—Plato, *Apologia*; St. Mark's Gospel; translation of unseen passages and Prose Composition. HEBREW—The Grammar—Davidson's *Hebrew Grammar*, Sections 1—31. Genesis, Chapters I. and II., with grammatical questions limited to the sections in the Grammar prescribed. MORAL PHILOSOPHY—General account of Ethical Theories, Ancient and Modern, as in Muirhead, *Elements of Ethics* (University Extension Manual). The examination at Glasgow will take place at the University, 2nd and 3rd October, 1907, at 10 a.m. each day.

The following are the subjects for October, 1908: LATIN—Livy, Book XXIV.; Virgil, *Æneid* VI.; Prose Composition and translation of unseen passages. GREEK—Plato; St. Matthew's Gospel; translation of unseen passages and Prose Composition. HEBREW and MORAL PHILOSOPHY—As above.

For further information and for forms of application apply to the Rev. John Smith, D.D., Manse, Partick.

and that he has attended some one of the courses required <sup>1</sup> for that degree, and has not only attended the classes of the course, but has duly performed the work of each of them. Students who produce certificates of having passed in any subject with a view to the degree of M.A. at a Scottish University, will be exempted from examination in that subject. All students—graduates as well as non-graduates—will be examined in New Testament Greek, and those whose certificates in their progress to a degree do not cover Greek, Latin, Moral Philosophy, and Hebrew will, in addition, be examined in any or all of those subjects not included. Students who began their Arts course before 1896 are requested to communicate with the Rev. Dr. Smith, Partick.

The student, in order to his enrolment *for each subsequent session* of his course, is required to present to the Professor of Divinity (a) a certificate from the Presbytery within whose bounds he chiefly resides, of his having been examined by them on the progress made by him in his studies, and of their satisfaction with the same, as well as (b) a certificate of his good moral character from the minister of his parish, or, during a vacancy in the parish, from the moderator of the kirk-session.

At the close of each session every student is required to take with him to the Presbytery certificates from the several Professors, under whom he has studied, of his good conduct and proficiency.

Candidates for licence who have finished a regular course of study in Theology shall be examined as soon as it can conveniently be done after the close of the Divinity session by the Examining Board. "The following shall be the heads of subjects of examination:—(i.) Apologetics, including Natural Theology; (ii.) Church History; (iii.) Old Testament Introduction and Exegesis; (iv.) New Testament Introduction and Exegesis; (v.) Christian Doctrine." "Students who have passed for the Degree of B.D., and who satisfy the Committee that they have done so, shall be exempted from examination in the subjects covered by the Degree of B.D." The Exit Examination for 1908 will be held at the University on 21st and 22nd April at 10 a.m.

<sup>1</sup> Any student who has gone through a curriculum in Arts in accordance with the provisions of Ordinance No. 11, but who has not graduated, may on application obtain, at the end of his course, a certificate to that effect at the Matriculation Office on production of his Preliminary Examination Certificate and the necessary Class-tickets duly signed.

The subjects of examination will be

- I. *Apologetics*. Flint's *Theism*.
- II. *Church History*.—1. To A.D. 325. 2. Scottish Church History, from Reformation to Revolution.
- III. *Old Testament Introduction and Exegesis*.—1. Jeremiah i.-v.: Text and Introduction. 2. Psalms lxi.-lxxii.
- IV. *New Testament Introduction and Exegesis*.—1. Epistle to Philippians. 2. Greek New Testament *ad aperturam*.
- V. *Christian Doctrine*.—1. The Doctrine of Christ's Divinity. 2. The Theology of the Epistle to the Romans. 3. Confession of Faith.

Those who have passed for the degree of B.D. will be examined in I., IV. 2, and V. 3 only.

The Convener of the Board is the Rev. David Paul, LL.D., 53 Fountainhall Road, Edinburgh; and the Vice-Convener, the Rev. John Smith, D.D., Partick.

Students are required to study the art of public reading and speaking under some competent teacher approved by the Faculty of Theology,<sup>1</sup> during at least one hour a week in each of two sessions, the attendance extending in every case over at least sixteen weeks of the session, and to produce, before being taken on trials, due evidence of such attendance.

By Act IX. of the General Assembly, 1895, it is enacted—"that every student before being taken on trial for licence shall produce evidence of having regularly attended two courses of the Pastoral Lectures provided by the Home Mission Committee."

Each student is required during his curriculum to deliver six discourses—viz., an ESSAY in English on some head in Divinity, a HOMILY in English, a CRITICAL EXERCISE on some portion of the original text of the Old Testament, an EXERCISE and ADDITION on some portion of the original text of the New Testament, a LECTURE on some portion of Scripture, and a POPULAR SERMON, with such other exercises as the Professors may think fit to prescribe. No student can be taken on trials for licence by any Presbytery until he has produced, along with class certificates from the Professors of Church History, Hebrew, and Biblical Criticism, a certificate from the

<sup>1</sup> For the purposes of the Act of Assembly, and to qualify for the competition for the Dowanhill Prizes, the following teachers are recognised:—Mr. Thomas Harrower, 282 Bath Street; Mr. John Forsyth, 20 Rupert Street; Mr. David B. Johnstone, A.M., 2 Ann Street, Hillhead; Mr. J. Bruce Alston, 207 Bath Street; Mr. Archibald Paterson, 43 Dalhousie Street; Mr. Graham Price, 22 Charing Cross Mansions, W.; and Mr. A. P. Roxburgh, F.E.I.S., 7 Caird Drive, Partickhill.

Professor of Divinity that the discourses so prescribed have been sustained.

The Faculty of Theology have adopted the following regulations as to the delivery of these discourses:—(1) That the Homily shall be given in to the Professor of Church History at such time as he shall appoint in the *first* session of the student's course; (2) that the English Essay shall be given in to the Professor of Divinity, and the Lecture to the Professor of Biblical Criticism, in the *second* year of the student's course, at such times as shall be appointed by these Professors respectively; and (3) that the Popular Sermon shall be given in to the Professor of Divinity, the Hebrew Critical Exercise to the Professor of Oriental Languages, and the Exercise and Addition to the Professor of Biblical Criticism, in the *third* session of the course, at such times as shall be appointed by the several Professors. The subjects of the Discourses will be prescribed by the Professors to whom they are severally to be given in.

### DIVINITY.

This Professorship was founded in 1640, and the foundation ratified in Parliament. The Professor is appointed by the University Court.

#### *Professors.*

1640-50. David Dickson.	1761. Robert Trail, D.D.
1642-61. Robert Baillie.	1775. James Baillie, D.D.
1653. John Young.	1778. William Wight, D.D.
1669. Gilbert Burnet, D.D.	1782. Robert Findlay, D.D.
1674. David Liddell.	1814. Stevenson Macgill, D.D.
1682. Alexander Ross, D.D.	1840. Alexander Hill, D.D.
1688. James Wemyss, D.D.	1862. John Caird, D.D.
1692. James Wodrow.	1873. William Purdie Dickson,
1708. John Simson.	D.D., LL.D.
1740. Michael Potter.	1895. William Hastie, D.D.
1744. William Leechman, D.D.	

1903. HENRY MARTYN BECKWITH REID, D.D.

The course of Theology extends over three sessions.

The class meets on five days of the week, in two divisions, the Senior at 11 A.M. and the Junior at 12 o'clock.

The subjects treated in the Lectures are—(1) Theology as a Science (Theological Introduction and Encyclopaedia);



(2) Philosophy of Religion; (3) Apologetics; (4) History of Religion; (5) Biblical Theology; (6) History of Doctrine; (7) Systematic Theology (Dogmatics and Ethics). Essays and Discourses are prescribed to the students. Examinations on the studies of the class will be held at intervals during the session.

PASTORAL TRAINING.—By a recent arrangement six Lectures on this subject will be given by a Lecturer appointed by the General Assembly.

### HEBREW AND SEMITIC LANGUAGES.

This Professorship was founded by Queen Anne, 1709, under the title Oriental Languages. It is now designated Hebrew and Semitic Languages, in accordance with Ordinance No. 31 of the Universities Commission (1889) of date 5th June, 1893. The Professor is appointed by the University Court. He is a member of the Faculty of Divinity, and also, since 1893, of the Faculty of Arts.

#### *Professors.*

1709. Charles Morthland.	1761. Patrick Cumin, LL.D.
1745. Alexander Dunlop, M.A.	1820. <sup>1</sup> Gavin Gibb, D.D.
1751. William Rouet.	1831. William Fleming, D.D.
1753. George Muirhead.	1839. George Grey, D.D.
1755. John Anderson, M.A.	1850. Duncan H. Weir, D.D.
1757. James Buchanan, M.A.	1877. <sup>2</sup> James Robertson, D.D.
1761. Robert Trail, D.D.	1907.

By Ordinance No. 11 of the Universities Commission (1889) "Hebrew" and "Arabic or Syriac" are now included among the departments of study for graduation in Arts, and "Semitic Languages" among those for graduation with Honours.

The existing regulations of the Church of Scotland require all students of Divinity to give attendance on Hebrew for two sessions. The following are the arrangements for session 1907-8:—

I.—*Junior Class (Hebrew)*, five days in the week at 10 A.M.  
(1) Davidson's *Introductory Hebrew Grammar*, with the Exercises; (2) Readings from the easier books of Scripture; (3) Lectures on Hebrew Archaeology.

II.—*Senior Class (Hebrew)*, five days in the week at 9 A.M., and two days in the week at twelve noon. (1) Readings

<sup>1</sup> Dr. Gibb was assistant and successor to Dr. Cumin from 10th October, 1814.

<sup>2</sup> Professor Robertson has intimated his intention to resign on 30th Sept., 1907.

in the Hebrew Scriptures, particularly in the books prescribed for degrees of M.A. and B.D.; (2) Exercises in Unpointed Text and Translations from English; (3) Study of the Syntax and the Accents; (4) Revisal and extended study of Grammar; (5) Lectures on History and Introduction.

The Senior Hebrew is appointed as the qualifying class for graduation in Arts. Before attending the class for this purpose, students are required by the Ordinance No. 11, sect. iv., 3, to pass a preliminary examination in Hebrew "on a standard as nearly as possible equivalent to the higher standard of the languages included in the Preliminary Examination." Students presenting themselves for this examination will be expected to know as much as is implied in the work of the Junior Hebrew Class, and will be examined in grammar, and in translation both from Hebrew into English and from English into Hebrew.

III.—*Honours Class (Hebrew)*: Tuesday, Wednesday, and Thursday, at 12 noon. Lectures on the History and Literature of the Hebrews; Prelections and Expositions of some of the books prescribed for the degree examinations; Readings in post-biblical Hebrew. Written exercises in Composition. History and comparison of the Semitic Languages.

IV.—For *Arabic Classes* see below.

A class for *Syriac*, to meet two days in the week at 9 A.M., will also be formed, if students offer.

## ARABIC LANGUAGE AND LITERATURE.

This Lectureship was instituted by the University Court in 1902.

*Lecturer*—THOMAS H. WEIR, B.D., M.R.A.S.

I.—An Elementary Class meets three days a week in winter and daily in summer at any hour that may be found suitable. The work includes study of the grammar with progressive written exercises, and translation from and into Arabic. Text-book: Socin, *Arabic Grammar*. If sufficient students offer, a special class will be formed for modern and conversational Arabic.

II. *Ordinary Class*.—This class qualifies for graduation in Arts, and may be taken either in one full course of one hundred

meetings, or in two half courses, the second half being a continuation of the first. The subjects of study comprise Grammar and Syntax, selected surahs of the Koran, selections from classical historians and poets, and history of the Arabs and their literature. Text-books: Nallino, *Chrestomathia Qorani Arabica*; Brünnow, *Chrestomathie*; Noeldeke, *Delectus Veterum Carminum Arabicorum*; Sale, *Koran*.

III. *Honours Class*.—This class is intended for those who wish to graduate with honours in Semitic Languages. The subjects of study will be the Koran with commentary, the *Makamat* of Haiiri, Arabic Grammar, selections from the early poets. Text-books: Baidawi, *Commentary*; Haiiri, *Makamat*, *Majani 'l Adab*, vol. vi., *Al Fakhri* (Derenbourg's Edition); Wright, *Arabic Grammar*.

*For the Oriental Society's Prize in Arabic, see under Prizes, and for the John Clark (Mile-end) Scholarship in Semitic Languages, see under Scholarships.*

### ECCLESIASTICAL HISTORY.

The Professorship of Ecclesiastical History was founded by George I., in the year 1716, but no appointment was made to the Chair till the year 1720. The Professor is appointed by the Crown.

#### *Professors.*

1721. William Anderson.	1841. Jas. Seaton Reid, D.D.
1752. William Rouet.	1851. Thos. T. Jackson, D.D.
1762. William Wight, D.D.	1874. William Lee, D.D.
1778. Hugh M'Leod, D.D.	1886. Robert Herbert Story,
1809 <sup>1</sup> . William M'Turk, D.D.	D.D., LL.D.
1898. JAMES COOPER, D.D.	

The course extends over two sessions, and embraces two series of lectures as well as written examinations and essays. The Junior and Senior Classes meet at separate hours, the Junior from 11 to 12 o'clock, the Senior from 12 to 1 o'clock.

The subjects treated in the Lectures during the two sessions will be:

I. JUNIOR CLASS.—The History of the Church Catholic from the Day of Pentecost to the close of the Fourth General Council. Books recommended—Mosheim, *Institutes of Ecclesi-*

<sup>1</sup> Dr. M'Turk was assistant and successor to Dr. M'Leod from 6th March, 1797.

*astical History* (edited by Stubbs); the *Church Histories* of Moeller, Kurtz, Neander, Gieseler, Schaff, and Canon Robertson (the parts covering the period above indicated); Harnack, *History of Dogma and Expansion of Christianity in the First Three Centuries* (trans. Moffatt); Eusebius, *Ecclesiastical History* (ed. Bright, Oxford, 1881; translation by M'Giffert); *The Teaching of the Twelve*; *The Apostolic Fathers* (ed. Lightfoot); The Library of Ante-Nicene Fathers; Ramsay, *The Church in the Roman Empire before A.D. 170*, *S. Paul the Traveller and Roman Citizen*, and *The Letters to the Seven Churches*; Pullan, *History of Early Christianity*, and *The Church of the Fathers*; Wordsworth, *The Ministry of Grace*; Puller, *The Primitive Saints and the See of Rome*; Rainy, *The Ancient Catholic Church*; Kelly, *A History of the Church of Christ*; Bright, *Waymarks of Church History* and *The Age of the Fathers*; Mason, *Historic Martyrs of the Primitive Church*; Hefele, *History of the Church Councils*; Percival, *The Seven Oecumenical Councils* (the first Four); Newman, *Arians of the Fourth Century*; Gibbon, *The Decline and Fall of the Roman Empire* (ed. Bury); Hodgkin, *Italy and her Invaders*, vols. I. and II. P. Allard, *Histoire de persécutions* and *Le Christianisme et l'empire romain de Néron à Théodore*.

II. SENIOR CLASS.—(1) The History of the Church of Scotland; (2) The History of the Church of England; (3) Some Important Epochs in the History of the Church. (N.B.—The special subject taken up in Session 1907-8 will be The Ecclesiastical History of England, Scotland and Ireland from 1760 to 1820.)

Books recommended—Grub, Cunningham, or Stephen, on the Ecclesiastical History of Scotland; Skene, *Celtic Scotland*; Dowden, *The Celtic Church in Scotland*; Macgregor, *Saint Columba*; Adamnan, *Saint Columba* (edit. Hayshe); The Chronicles of the Picts and Scots; the series "The Historians of Scotland"; Joseph Robertson, *Statuta Ecclesiae Scoticanæ*; John Knox, *History of the Reformation in Scotland* (ed. Laing); Spottiswood; Calderwood; Baillie; M'Crie, *Knox*; William Robertson, *History of Scotland*; Hume Brown, *History of Scotland and John Knox*; Andrew Lang, *History of Scotland*; W. L. Mathieson, *Politics and Religion in Scotland, 1550-1695*; Haddan and

Stubbs, *Councils of Great Britain and Ireland*; Bede, *Ecclesiastical History of England*; Fuller, *Church History of Britain*; Collier, *Ecclesiastical History of Great Britain*; Stubbs, *Constitutional History of England*; Hume, Lingard, Macaulay, Froude, and S. R. Gardiner, *Histories of England*; Wakeman, *History of the Church of England*; A History of the English Church, edited by Stephens and Hunt; Dixon, *History of the Church of England*; Burnet, *History of the Reformation*; Stoughton, *Religion in England*, part covering period, and the books recommended at page 305 for those studying for the Degree of B.D.

The following subjects have been prescribed for *Essays*, which must be given in before Nov. 30th, 1907: (1) S. Paul's attitude (a) to Courts Christian, and (b) to the Law Courts of the Roman Empire; (2) Sabellianism: its appearance in the Ancient Church and its recrudescence in Modern times; (3) S. Leo the Great, Theologian and Pope; (4) S. Boniface, the "Apostle of Germany," his missionary labours and letters; (5) The treatment of the Covenants—the National Covenant, and Solemn League and Covenant—by the Church of Scotland at the Revolution; (6) The Ecclesiology and Ecclesiastical History of any Parish in Scotland in or near which the student may be resident. Marks, up to 100, according to merit, will be assigned (session 1907-8) to the writers of one of those essays.

A written examination of the Senior Class (session 1907-1908) will be held not later than 30th Nov., 1907, on Venerable Bede's *Ecclesiastical History of England* and S. Adamnan's *Saint Columba* (which may be read in translations), for which marks up to 100 may be obtained. The marks obtained both for the essay and for this examination will count for the Prize List. The subjects for Essays to be given in November, 1908, are:

(1) The "Social Work" of the Church in the Early Ages (till A.D. 400); (2) Catena of Ante-Nicene Witnesses to the Virgin-Birth of the Redeemer; (3) The History of the Church of Cumbria and the See of Glasgow till 1272; (4) Alcuin; (5) John Wesley in Scotland and Ireland; (6) The Brothers Haldane, and the effects of their work on Thought and Life in Scotland; (7) The Ecclesiology and Ecclesiastical History of any Parish in Scotland in which the student may have been resident.

### DIVINITY AND BIBLICAL CRITICISM.

This Professorship was founded by ordinance of the Universities Commission (1858) of date 25th November, 1861. The Professor is appointed by the Crown.

#### *Professors.*

1863. William P. Dickson, D.D.

1873. WILLIAM STEWART, D.D.

This class will meet on five days of the week at 10 A.M.

The course of lectures is arranged to extend over two sessions; and the class should accordingly be attended in two *consecutive* years. It is usually taken in the second and third years of the Divinity course. For due performance of the work of the class a knowledge of Greek, at least of New Testament Greek, is indispensable. (See below.)

The lectures in 1907-8 will treat of the principles of Textual Criticism, and of some portions of New Testament Introduction.

The practical application of the principles of Criticism and Hermeneutics will be illustrated in Exegetical Lectures, and by the reading of portions of the Greek New Testament.

Essays on subjects suggested by the work of the class are prescribed at intervals during the session, and the progress of the students is further tested by examinations, partly oral and partly written.

*Class of New Testament Greek.*—Those who have not included Greek in their Arts course, or who have not succeeded in making themselves familiar with New Testament Greek, should not fail to attend this tutorial class in the first session of their Divinity course, that they may be in a position to profit by the prelections and exercises in the Biblical Criticism Class during the two succeeding years. It should be noted also that in the Exit Examination all students, both Bachelors of Divinity and others, are required to show proficiency in reading the New Testament in Greek *ad aperturam*. The Class will meet on three days of the week, viz., Monday, Wednesday, and Friday at 9 A.M. The hour has been fixed to suit the convenience of Students in the first and the third year of the Divinity course. (See time-table on pp. 142, 143.)

## IV.—ENDOWED DEMONSTRATORSHIPS, ETC.

THE ARNOTT AND THOMSON DEMONSTRATORSHIP  
IN EXPERIMENTAL PHYSICS.

This Demonstratorship was founded in 1875 by the liberality of Sir William Thomson and Mrs. Arnott, widow of Dr. Neil Arnott, founder of the Arnott Prizes, who invested respectively £2,000 and £1,000 for the purpose of encouraging the study of Experimental Physics in the University of Glasgow. The Demonstratorship is in connection with the Physical Laboratory of the University. The holder is appointed annually by the Professor of Natural Philosophy, subject to the approval of the University Court, and his duties are to perform, and direct in the performance of, experimental researches in the Physical Laboratory, in connection with, and under the direction of, the Professor of Natural Philosophy, to give practical laboratory courses suitable for Medical and Engineering students, and to take part in the teaching of the Natural Philosophy Class, if required by the Professor, and in such way and at such times as may be appointed by the Senatus Academicus of the University.

*Demonstrators.*

1875. James Thomson Bottomley, M.A., D.Sc., F.R.S.

1899. James W. Peck, M.A.

1903. James Muir, D.Sc., M.A.

1906. JAMES G. GRAY, B.Sc.

## THE MUIRHEAD DEMONSTRATORSHIP OF PHYSIOLOGY.

In January, 1877, the late Dr. Henry Muirhead of Longdales, Bothwell Parish, and afterwards of Cambuslang, presented to the University the sum of £2,100, and in November, 1879, a further sum of £400, to endow a Demonstratorship of Physiology in connection with the Chair of Institutes of Medicine—the main object being the promotion of medical science by the training of young men of suitable capacity to become teachers and investigators of Physiology. The regulations with reference to the appointment are as follows:—

1. That the title of the appointment be “The Muirhead Demonstrator of Physiology.”

2. That the holder of the office shall act as an assistant to the Professor of Institutes of Medicine in teaching the classes of Systematic and Practical Physiology and in original investigation.

3. That he shall also be expected and encouraged to engage in independent scientific investigation under the direction of the Professor.

4. That he will not be entitled to conduct any class on his own account without the consent of the Professor.

5. That the incumbent will be expected to devote his entire time to the duties of the appointment.

6. That the appointment be made annually by the Senatus Academicus, with the consent of the University Court, on the recommendation of the Professor of the Institutes of Medicine, who shall furnish evidence to the Senatus of the suitability of the person recommended by him.

*Present Demonstrator.*

HUGH H. FULTON, M.B., Ch.B.

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#### GRIEVE LECTURESHIP ON PHYSIOLOGICAL CHEMISTRY.

The late John Grieve, M.A., M.D., who died at Glasgow on 16th April, 1896, directed his Trustees to hand over to the University the sum of £8000 (less legacy duty) for the foundation of a Lectureship on some subject selected by them after consultation with certain Professors. The subject selected was Physiological Chemistry, and the following scheme prepared by the Senate was approved by the University Court on 9th February, 1905.

1. The bequest of the late Dr. John Grieve shall be applied to the foundation of a Lectureship on Physiological Chemistry in the University of Glasgow, to be called the "Grieve Lectureship on Physiological Chemistry."

2. The capital sum of the bequest shall be invested by the University Court, and the annual revenue shall be the salary of the holder of the lectureship for the time being.

3. The appointment to the lectureship shall be made by the University Court.

4. The appointment shall be for a term of five years, but the lecturer may be re-elected in the discretion of the University Court.

5. The lectureship shall be in connection with the Physiological Department of the University, and accommodation for the lecturer shall be provided in that Department by arrangement with the Professor of Physiology.



6. The lecturer shall not engage in medical or surgical practice during his tenure of office.

7. The duties of the Lecturer shall be as follows :

(1) He shall deliver annually such a course of lectures or give such demonstrations in Physiological Chemistry, on the more advanced aspects of the subject, in its relation to the phenomena of Plant and Animal life, as may from time to time be arranged by the Senate, with the approval of the University Court.

(2) He shall take charge of the laboratory for Physiological Chemistry in the Physiological Department of the new buildings, under the control of the Professor, in terms of Ordinance No. 17, General No. 10 ; he shall supervise the chemical work of students of physiology preparing for the degree of Bachelor of Science ; and generally he shall give assistance to students or others who may be engaged in researches in Physiological Chemistry.

(3) He shall make arrangements, under the control of the Professor, for the teaching of elementary Physiological Chemistry to students of science and medicine, in terms of the above Ordinance.

(4) He shall prosecute original research in Physiological Chemistry.

*Lecturer.*—1905. EDWARD P. CATHCART, M.D.

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#### THE WILLIAM BAXTER DEMONSTRATORSHIP IN GEOLOGY.

This Demonstratorship was founded by the Trust Disposition and Settlement of Mr. William Baxter, Hillhead, Glasgow, who died on 20th November, 1888, and bequeathed to the Senate the sum of £2,500, free of legacy duty, the annual income of which, less the cost of management, he directed should be paid half-yearly to the Demonstrator on the joint certificate of the Clerk of Senate and the teacher of Geology for the time being. The Senate are the patrons of the Demonstratorship.

The following Regulations, drawn in terms of the Founder's will, were adopted by the Senate on 28th February, 1889 :—

1. The Demonstratorship shall be held for three years, and shall be open to the candidate who in the three years intervening between each appointment shall have passed the Degree of

B.Sc. with Honours, or, in the event of several candidates obtaining Honours, to the candidate whose aggregate marks for the whole subjects of the said degree are the highest; but in the event of no candidate attaining to Honours, the Senate may, if they see fit, award the Demonstratorship to the candidate who shall stand highest in the list, provided his average of marks over all the said subjects is not less than 70 per cent., but any candidate who fails to obtain at least 70 per cent. of marks in the Department of Geology shall *eo ipso* be disqualified to hold the Demonstratorship.

2. The three years' tenure of office shall be subject to the condition that the incumbent discharges the duties of the office to the satisfaction of the Senate, who have power "to deprive any Demonstrator of his stipend, or a part thereof, should they at any time become dissatisfied with his conduct or his ability to carry out the duties of his office, or with the character of his lectures, or for any other reason they may consider sufficient," the Demonstrator having the right of appeal to the University Court in the event of such deprivation.

3. The duties of the Demonstrator shall be:—

(1) To deliver two courses of lectures—twenty in the winter, twenty in the summer session—(a) on Mineralogy and Petrology, or (b) on Palæontology, or (c) on Physical Geography. These lectures to be accompanied by Demonstrations on specimens selected from the Hunterian collections with the consent of the Keeper.

(2) To give Field Demonstrations of Geology and Petrology, under the direction of the Professor of Natural History (or of Geology when that Chair shall be founded).

(3) To carry on original work in any department of Geological Science which he may select, obtaining therein such assistance by specimens as the Keeper of the Museum shall find it in his power to give.

4. These courses of lectures may be attended (a) by matriculated students of Geology, free; (b) by any matriculated student not a member of the class of Geology, on payment to the Demonstrator of a fee of £1 1s. for each course, or such higher fee as the University Court may fix; (c) by any member of the Geological Society of Glasgow on payment of five shillings in lieu of matriculation fee for the winter or summer session, in addition to the authorized class fee.

5. In the event of no appointment being made, or of the Demonstrator resigning, retiring, or being deprived, the revenue accruing during the period of vacancy shall be added to the capital, and the annual income thereof to the stipend payable to the Demonstrators.

*Demonstrator*—WILLIAM R. WISEMAN, M.A., B.Sc., 1905.

#### WALTONIAN MEDICAL LECTURESHIP.

This Lectureship was founded in 1788 by the Rev. Dr. William Walton, Rector of Upton, in the County of Huntingdon, who bequeathed to the Senate for its support the sum of £1000, increased by subsequent accumulations to £2787. The lecturer is required to take for his subject that branch of Medicine or Science connected with Medicine which may be assigned to him by the Governing Body of the University. From 1792 a salary was provided out of the Walton Fund for a lecturer on Midwifery till 1815, when the Chair of Midwifery was founded. From 1816 provision was made in like manner for the teaching of *Materia Medica* till a Chair in that subject was founded in 1831. Since 1831 the lectureship has been devoted to the subject of Ophthalmology, but, on the resignation of Dr. Thomas Reid in the end of 1900, the University Court, taking into account that the requirements of Ophthalmology under the new Ordinances were met by the training afforded to students in the Glasgow Eye Infirmary and the Glasgow Ophthalmic Institution, resolved to devote the proceeds of the Foundation to the teaching of some other subject. The arrangements for this are not yet completed.

#### *Lecturers.*

*Midwifery*—1792-1815. James Towers, C.M.

*Materia Medica*—1816-1831. Richard Millar, M.D.

*Ophthalmology*—1831-1868. William M'Kenzie, M.D.

*Ophthalmology*—1871-1900. Thomas Reid, M.D., LL.D.

#### GIFFORD LECTURESHIP ON NATURAL THEOLOGY.

This Lectureship, as well as similar Lectureships in the other Scottish Universities, was founded in 1887 in accordance with the Trust Disposition and Settlement of the late Adam Gifford, sometime one of the Senators of the College of Justice,

Scotland. Lord Gifford directed his Trustees to pay over to the *Senatus Academicus* of the University of Glasgow the sum of Twenty Thousand Pounds for the purpose of establishing a Lectureship or Popular Chair for promoting, advancing, and diffusing the study of Natural Theology, in the widest sense of that term—in other words, “the Knowledge of God, the Infinite, the All, the First and Only Cause, the One and the Sole Substance, the Sole Being, the Sole Reality, and the Sole Existence, the Knowledge of his Nature and Attributes, the Knowledge of the Relations which men and the whole universe bear to Him, the Knowledge of the Nature and Foundation of Ethics or Morals, and of all Obligations and Duties thence arising.” The Senate are the Patrons. The Lecturer is appointed for a period of two years and no longer, but the same Lecturer may be reappointed for other two periods of two years each, provided that no one person shall hold the office of Lecturer in this University for more than six years in all. The Lecturer is subjected to no test of any kind, and he is not required to take any oath, or to emit or subscribe any declaration of belief, or to make any promise of any kind. The Founder expressed a wish that the subject should be treated as a strictly natural science, like astronomy or chemistry. Matri-culated students and others may attend the Lectures.

1888. Professor Max Müller.

1892. Principal Caird, D.D., LL.D.

1893. Professor William Wallace, M.A.

1895. Principal Caird, D.D., LL.D.

1896. Professor Alexander B. Bruce, D.D.

1900. Edward Caird, D.C.L., LL.D., Master of Balliol.

1903. Professor Émile Boutroux.

1906. PROFESSOR A. C. BRADLEY, LL.D.

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#### ALEXANDER ROBERTSON LECTURESHIP.

The Rev. Alexander Robertson, a probationer of the Free Church of Scotland, who died at Glasgow on 3rd August, 1899, left the residue of his estate, amounting to £2500, for the endowment of a Lectureship in defence of the Christian Religion. The regulations drawn up by his Trustees—Mr. James Lymburn, Librarian to the University, and the Rev. James B. Dalgety,

Paisley—received the sanction of the University Court on 14th November, 1901, and are as follows :

1. The Lectureship shall be called the Alexander Robertson Lectures.

2. The course shall be held not oftener than once in every two years, and shall consist of not fewer than five lectures.

3. Out of the revenue of the Lectureship Fund the lecturer shall be paid the sum of £100 when the lectures have been delivered, and a further sum of £50, provided he shall have published his lectures within one year of their delivery, and shall have furnished to the Library of the University of Glasgow fifty copies for distribution.

4. The Lecturer shall be appointed by the University Court on the nomination of a Committee consisting of the Principal of the University and of the Professors in the Faculty of Theology; and it shall be in the power of the Committee to nominate, if they see fit, a member of the Faculty of Theology.

5. It shall be the duty of the Court, at least twelve months before the income of the Lectureship Fund shall have reached the sum necessary to pay the remuneration of the Lecturer and the grant for publication of the lectures, to send intimation to that effect to the Dean of the Faculty of Theology, and should the aforesaid Committee fail to nominate any one within six months after receiving the said intimation, it shall be in the power of the Court to proceed of itself to the selection and appointment of a Lecturer.

6. The lectures shall be delivered at such times and in such place or places as the said Committee may appoint. Admission to the course shall not be restricted to matriculated students, but shall be freely open to the general public.

7. All surplus revenue and any balance accruing from the non-publication of the lectures or otherwise shall be added to the capital fund of the Lectureship. But should at any time the biennial income of the fund reach a larger sum than £150, two-thirds of the balance over that amount shall go to augment the emolument of the Lecturer, and one-third to increase the grant for the publication of the lectures.

*Lecturers.*

1904. John Morri-on, D.D.

1906. ERNEST F. SCOTT, M.A.

## THE HASTIE LECTURESHIP.

The friends of the late Rev. William Hastie, D.D., Professor of Divinity in the University, having subscribed the sum of £1000 to perpetuate his memory, resolved on 24th November, 1905, that the fund should be vested in six Trustees, divided into three official and three elected Trustees. The official Trustees are the Principal, the Dean of the Faculty of Theology, and the Professor of Divinity. Should the Professor of Divinity be also Dean, then the third official Trustee is a Professor in the Faculty of Theology, nominated by the Faculty. The other Trustees were elected by the donors from amongst themselves. In certain contingencies vacancies in the elected Trustees are filled up by the Presbytery of Glasgow and the Senate alternately. The subscribers further resolved that a Lectureship to be called the Hastie Lectureship should be founded, its object being to encourage the study of Theology amongst the Ministers of the Church of Scotland. The Lecturer is appointed by the Trustees and holds office for three years, delivering in each year not less than four or more than six lectures, in Glasgow University or elsewhere as the Trustees may determine. Admission to the lectures is free to all. The Lecturer receives the free proceeds of the Fund, and he is bound to publish at least 500 copies of his lectures at his own expense and to present to the Trustees ten copies for distribution.

*Lecturer.*

1906. REV. DONALD M'MILLAN, D.D.

*V.—WOMEN'S DEPARTMENT.**QUEEN MARGARET COLLEGE.*

In February, 1892, the Universities Commission issued an Ordinance (No. 18), empowering the Scottish University Courts to make provision within the Universities for the instruction of women, either by admitting them to the ordinary classes, or by instituting separate classes for their instruction. The Council of Queen Margaret College, having considered the provisions of this ordinance, came to the conclusion that the purpose for which the College had been instituted would be best served by making over their work to the University of Glasgow. They accordingly, with the concurrence of the late Mrs. Elder, the proprietrix of the buildings and grounds hitherto occupied by the College, offered to transfer to the University Court these buildings and grounds, and the endowments (present and prospective), on condition that these should be devoted to the establishment and maintenance of University Classes for women exclusively. The University Court, after consultation with the Senate, having resolved to exercise the power conferred by Ordinance No. 18, and to provide University instruction for women mainly by the institution of separate classes, agreed to accept the offer made by Queen Margaret College, and remitted to a Committee to take the necessary steps for completing the transfer. In virtue of this arrangement the teachers in Queen Margaret College were appointed by the University Court, and the students in session 1892-3 were admitted matriculated students of the University. In 1893 the College was dissolved, and the funds were handed over to the University Court, but the name "Queen Margaret College" survives as designating the part of the University buildings and grounds which is devoted exclusively to the education of women.

ALL women students are required to matriculate and to pay their Class Fees and Examination Fees at Queen Margaret College.

The classes in Queen Margaret College will meet as follows daily, unless otherwise specified :—

## WINTER SESSION 1907-8.

## I.—ARTS.

THURSDAY, 17TH OCTOBER.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Latin</i> (at the University),	3.15 p.m.,	£4 4 <sup>6</sup>	{ PROF. PHILLIMORE, Mr. D. Rankin, and Mr. R. Nisbet.
<i>Greek</i> , <sup>1</sup>	8.45 a.m.,	4 4 <sup>6</sup>	
<i>Greek</i> <sup>1</sup> (at the University),	8 a.m.,	4 4 <sup>6</sup>	{ PROF. DAVIES and Mr. W. Rennie.
<i>English Language and Literature</i> , }	2 p.m.,	4 4 <sup>6</sup>	
<i>French Language and Literature</i> , }	9.45 a.m.,	4 4 <sup>6</sup>	{ PROF. DIXON and Mr. John S. Smart.
<i>German</i> <sup>2</sup> <i>Language and Literature</i> , }	11.15 a.m.,	4 4 <sup>6</sup>	
<i>German</i> <sup>2</sup> (at the University),	10 a.m.,	4 4 <sup>6</sup>	{ Dr. G.P. Thistlethwaite.
<i>Italian</i> ,	3 p.m.,	4 4 <sup>6</sup>	
———, Elementary (see p. 78),		2 2	{ Dr. Agnoletti.
<i>Logic</i> , <sup>3</sup>	12.15 p.m.,	4 4 <sup>6</sup>	
<i>Logic</i> , <sup>3</sup> (at the University),	9 a.m.,	4 4 <sup>6</sup>	{ Mr. A. A. Bowman.
<i>Moral Philosophy</i> , <sup>4</sup>	3 p.m.,	4 4 <sup>6</sup>	
<i>Moral Philosophy</i> <sup>4</sup> (at the University),	8 a.m.,	4 4 <sup>6</sup>	{ PROF. LATTI.
<i>Political Economy</i> (Do.),	2 p.m.,	4 4 <sup>6</sup>	
<i>Education</i> (Do.),	4 p.m.,	4 4 <sup>6</sup>	{ Mr. J. W. Scott.
<i>History</i> (Do.),	10 a.m.,	4 4 <sup>6</sup>	
<i>Mathematics</i> ,	{ 8.45 a.m.,	4 4 <sup>6</sup>	{ PROF. JONES.
	{ 2 p.m.,	4 4 <sup>6</sup>	
<i>Natural Philosophy</i> , <sup>5</sup> (Lectures) at Univ.,	9 a.m.,	4 4 <sup>6</sup>	{ PROF. SMART.
<i>Natural Philosophy</i> , <sup>5</sup> (Lectures and Practical Work) at Univ. [Hours to be arranged]		6 6	
<i>Physical Laboratory</i> (at the Univ.)	10 a.m. to 4 p.m.,	6 6	{ Mr. William Boyd.
———, Half Session,		4 4	
<i>Chemistry</i> ,	12 noon,	4 4 <sup>6</sup>	{ PROF. MEDLEY.
<i>Chemical Laboratory</i> { 9 a.m. to 1 p.m., }		5 5 or 10 10	
(in winter), { and 2 p.m. to 5 p.m. }			{ PROF. JACK, Mr. Bell, and Mr. Picken.

## II.—MEDICINE.

THURSDAY, 17TH OCTOBER.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Zoology, Elementary</i> (at University),	9 a.m.	£4 4 <sup>6</sup>	{ PROFESSOR KERR and Mr. Agar.
<i>Zoological Laboratory, Elementary</i> (at Univ.),	3 p.m.,	3 3	
<i>Chemistry</i> ,	12 noon,	4 4 <sup>6</sup>	{ Dr. H. W. Bolam.
<i>Chemical Laboratory</i> , { 9 a.m. to 1 p.m., }		5 5 or 10 10	
{ and 2 p.m. to 5 p.m. }			{ Dr. T. H. Bryce.
<i>Practical Chemistry</i> (after Christmas),	2-5 p.m.	5 5	
<i>Anatomy, Junior</i> ,	11 a.m.,	4 4 <sup>6</sup>	{
———, <i>Senior</i> ,	3.15 p.m.,	4 4 <sup>6</sup>	
<i>Practical Anatomy</i> ,	9 a.m. to 5 p.m.,	3 3 <sup>7</sup>	}

<sup>1</sup> Women students may select either class of Greek.<sup>2</sup> Women students may select either class of German.<sup>3</sup> Women students may select either class of Logic.<sup>4</sup> Women students may select either class of Moral Philosophy.<sup>5</sup> Women students may select any class of Natural Philosophy.<sup>6</sup> Fee for a second or subsequent session, £3 3s.<sup>7</sup> Students who have taken two winters and two summers of Practical Anatomy, as well as the Junior and Senior Lecture Courses, may afterwards enrol in Practical Anatomy at £1 1s.



<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Physiology</i> (at University), . . .	12 noon, . . .	£4 4 <sup>1</sup>	{ PROF. NOËL PATON and Muirhead Demonstrator.
<i>Materia Medica and Therapeutics</i> , . . .	2 p.m., . . .	4 4 <sup>1</sup>	Dr. MacLennan.
<i>Pathology, Systematic</i> , <sup>5</sup> . . .	8 a.m., . . .	4 4 <sup>1</sup>	Dr. Workman.
<i>Surgery</i> , . . .	4 p.m., . . .	4 4 <sup>1</sup>	Dr. Pringle.
<i>Practice of Medicine</i> , . . .	4 p.m., . . .	4 4 <sup>1</sup>	Dr. W. K. Hunter.
<i>Clinical Surgery</i> , . . .	9 a.m. (see Hospitals).		
<i>Clinical Medicine</i> , . . .	9 a.m., (see Hospitals).		
<i>Midwifery</i> , . . .	12 noon, . . .	4 4 <sup>1</sup>	{ PROFESSOR M. CAMERON and Dr. J. M. M. Kerr.

SUMMER SESSION 1908.

MEDICINE.

WEDNESDAY, 22ND APRIL.

<i>Classes.</i>	<i>Hours.</i>	<i>Class Fees.</i>	
<i>Physics</i> (at University), . . .	11 a.m., . . .	£3 3	Mr. G. W. Walker.
<i>Practical Physics</i> , 9-11 a.m. and 1-3 p.m. (see p. 89), . . .		2 2	PROFESSOR GRAY.
<i>Botany</i> , . . .	8 a.m., . . .	4 4 <sup>1</sup>	} PROF. BOWER.
<i>Practical Botany</i> (at University), 1 to 3 p.m., <sup>2</sup> . . .		3 3	
<i>Practical Anatomy</i> , . . .	9 a.m. to 5 p.m., . . .	2 2 <sup>3</sup>	} Dr. T. H. Bryce.
<i>Embryology</i> , . . .	{ 11 a.m., Mon., Tues., Wed., Thurs., }	2 2	
<i>Practical Anatomy and Embryology</i> , if taken together, . . .		3 3	
<i>Practical Pharmacy</i> , . . .	12 to 1 p.m., . . .	3 3	Dr. MacLennan.
<i>Practical Physiology</i> (at University), 9-11 a.m., . . .		4 4 <sup>4</sup>	{ PROF. NOËL PATON and Muirhead Demonstrator.
<i>Forensic Medicine</i> (at University), 11 a.m., . . .		4 4 <sup>1</sup>	PROFESSOR GLAISTER.
<i>Practical Pathology</i> , <sup>5</sup> . . .	8 a.m., . . .	3 3	Dr. Workman.
<i>Operative Surgery</i> , . . .		2 2	Dr. Pringle.
<i>Insanity</i> , . . .	{ 12 noon, Wed., University, and 10 a.m. Sat., at Gartnavel. }	2 2	Dr. Oswald.
<i>Diseases of the Eye</i> , . . .	{ 4 p.m., Tues. (in Ophthalmic Institute), and Fri. (in Queen Marg. College), and Clinique, 2 p.m. on Mon., Wed., and Thurs. }	2 2	Dr. A. M. Ramsay.

HOSPITALS.—Royal Infirmary—First year, £10 10s.; Second year, £10 10s.; six months, £6 6s.; three months, £4 4s. Royal Hospital for Sick Children—twelve months, £1 1s. Glasgow Maternity Hospital—£3 3s. Belvidere and Ruchill Fever Hospitals, £1 1s.

SCIENCE CLASSES.—Of the subjects above enumerated the following are also in the Faculty of Science, viz.:—Mathematics, Natural Philosophy, Chemistry, Botany, Zoology, Geology, Anatomy, Physiology, and attendance upon the lectures and in the practical classes qualifies for graduation in Science.

The Honours Classes in Arts and the Higher Classes in Science at the University are open to women.

<sup>1</sup> Fee for a second or subsequent session, £3 3s.

<sup>2</sup> Students who are taking no class but Botany may take the Practical Class from 9 to 1 a.m., if notice of their wish to do so is given at the beginning of the session.

<sup>3</sup> Students who have taken two winters and two summers of Practical Anatomy, as well as the Junior and Senior Lecture courses, may afterwards enrol in Practical Anatomy at £1 1s.

<sup>4</sup> For students who have already attended the class the fee for any one of the three sections is £1 1s.

<sup>5</sup> Students have the option of attending Professor Muir's classes in the Pathological Institute, Western Infirmary.

The arrangements for the classes in Queen Margaret College are similar to those of the classes for men, with the exception of English, French, German, Logic, and Moral Philosophy, the arrangements for which are as follows:—

## ENGLISH LANGUAGE AND LITERATURE.

*Professor*—W. M. DIXON, M.A., Litt.D., LL.B.

*Lecturer*—John S. Smart, M.A.

*Assistant*—Robert Dewar, M.A.

The class will meet daily, except on Saturday, at 2 p.m.

I. On Monday, Wednesday, and Friday throughout the session, lectures on the History of English Literature will be given, with special reference to (a) The Renaissance in English Literature from Chaucer to Spenser; (β) Milton and classical influence in English poetry; (γ) aspects of 19th century poetry from the greater romantic poets to the middle of the century. Ward's *English Poets*, Vol. IV., will be the text-book.

II. On Tuesdays before Christmas lectures will be given on literary theory, and after Christmas lectures on Philology.

III. On Thursdays, throughout the session, lectures will be given on the Romantic Revival, forming a series continuous with those described in I. (γ).

In addition to Ward, Vol. IV., the set texts will be:—

Chaucer's *Nonne Preestes Tale*; Shakespeare's *Henry IV.* and *Macbeth*; *The Golden Treasury of Songs and Lyrics*, with special reference to Books I. and II.

The following books may prove useful to those who wish to prepare for the class:—

(a) The Renaissance. Jusserand's *Literary History of the English People*, Vol. I.; Einstein's *Italian Renaissance in England*; Courthope's *History of Poetry*, Vol. V.; Church's *Spenser*. (β) Milton. Courthope, Vol. III.; Masson's edition of Milton's poems. (γ) The Romantic Revival. In addition to Ward, H. A. Beer's *History of English Romanticism*; chapters in Stephen's *English Thought in the Eighteenth Century*, Vol. II.; selections from Thomson, Gray, Chatterton; Henley's

*Essay on Burns*; Wordsworth's *Prelude*, *The Lyrical Ballads*; "The Golden Treasury," Shelley; Keats, the 1820 volume; Byron, "The Golden Treasury" volume; of Scott, Tennyson, and Browning, the student may read at will.

Students who have already taken the ordinary class are permitted to attend the Lectures on Monday, Wednesday, and Thursday or Friday, for a fee of £2 2s. Such attendance cannot be reckoned towards graduation.

For the Honours Class, see p. 75. *For the Nichol Memorial Prize, see Index.*

## FRENCH LANGUAGE AND LITERATURE.

### *Lecturers.*

1895. Alfred Mercier, L.ès-L.

1898. CHARLES MARTIN, M.A. (Paris), O.A.

*Assistant*—Léon Pitoy, L.ès-L. Phil., B.Sc. (Paris).

Students are advised to read the authors mentioned in the syllabus, and *not* to attend the French Language and Literature Class during the first year of their University course. Their work will be more thorough if it is done on a good English and classical foundation.

The class meets daily at 9.45 A.M. The work of the class includes the subjects stated in the syllabus of the class of French Language and Literature at page 76. A tutorial class meets for the improvement of pronunciation and the correction of exercises and essays.

A class library well provided with books of reference is open to students from 9 a.m. till 5 p.m.

Students who take French for purposes of graduation must attend both classes, but students who do not intend to graduate may take the Language Class alone or the Literature Class alone. The fee for the Language Class alone or the Literature Class alone is £2 2s.

HONOURS CLASS.—See p. 76.

## GERMAN LANGUAGE AND LITERATURE.

*Lecturer*—G. P. THISTLETHWAITE, B.A., Ph.D.

*Assistant*—FRIEDRICH BROECKER.

ORDINARY CLASS.—This class meets daily at 11.15 A.M., and the course, which extends to one hundred meetings, qualifies for graduation in Arts. The work of the class includes the subjects stated in the syllabus of the class of German Language and Literature at page 77.

Students who do not intend to graduate may take either the Literature Class or the Language Class alone. The fee for one class alone is £2 2s.

HONOURS CLASS.—See p. 78.

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## LOGIC.

*Lecturer*—ARCHIBALD A. BOWMAN, M.A.

This class meets daily at 12.15 P.M., and the course, which extends to one hundred meetings, qualifies for graduation in Arts.

The work of the class includes the subjects stated in the syllabus of the class of Logic and Rhetoric at page 81.

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## MORAL PHILOSOPHY.

*Lecturer*—JOHN W. SCOTT, M.A.

This class meets daily at 2.45 P.M., and the course, which extends to one hundred meetings, qualifies for graduation in Arts.

The work of the class includes the subjects stated in the syllabus of the class of Moral Philosophy at page 82.

## VI.—*SPECIAL STUDY AND RESEARCH.*

In Ordinance No. 61, the Universities Commission (1889) made the following regulations for the encouragement of special study and research, and for the appointment of Research Fellows :—

I. It shall be in the power of the *Senatus Academicus* in each University, with the approval of the University Court, to make regulations under which graduates of Scottish Universities or of other Universities recognized by the University Court for the purposes of this ordinance, or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research, may be admitted to prosecute such study or research in the University.

II. It shall be the duty of the *Senatus Academicus* in each University—(1) To receive and decide upon all applications for admission to prosecute special study or research ; (2) To prepare a list of all persons so admitted (hereinafter referred to as Research Students) ; (3) To make regulations for the supervision of their work ; (4) To satisfy themselves from time to time that the Research Students are carrying on their work in the University in a satisfactory manner ; (5) To suspend or exclude from any course any student whose conduct or progress is unsatisfactory.

III. Every applicant for admission must send in to the *Senatus Academicus* a written application stating any degree or other distinction which he has already obtained, the line of study or research which he wishes to prosecute and the probable period of its duration, together with evidence as to his character, capacity, and general qualifications.

IV. Any application for admission shall be in the first instance referred by the *Senatus Academicus* to the appropriate Faculty, or to a Committee appointed by the *Senatus* ; one member of the Committee shall always be a Professor or Lecturer within whose department the proposed line of study or research falls. No applicant shall be recommended by the Faculty or the Committee who has not satisfied them by examination or otherwise that he is qualified to prosecute the proposed line of study or research, and further—(a) That his proposed line of study or research is a fit and proper one ;

(b) That he possesses a good general education ; (c) That he is of good character ; (d) That he proposes to prosecute his studies or research during a period to be approved by the Senatus Academicus. The Faculty or the Committee shall make a report to the Senatus Academicus upon each application. It shall also be their duty, subject to the regulations of the Senatus Academicus, to provide for the supervision of the Research Student's work, and to report at least once a year to the Senatus as to his progress and conduct. The Senatus shall then determine whether he shall remain a Research Student.

V. Every Research Student shall be required to matriculate each year, paying the ordinary fee.

VI. Research Students shall have access to and the use of the University Laboratories and Museums, under such conditions as to payment and otherwise as the University Court, after consultation with the Senatus Academicus, may determine.

Under this section the following regulations have been made:—1. In each laboratory each Research Student shall make payment of a sum which is estimated by the Professor as sufficient to cover the ordinary expenses incident to the Research Student's work. Apparatus and material beyond what is included in the ordinary operations of the laboratory shall be charged to the Student, unless the Professor judges that such apparatus and material will be a useful addition to the laboratory. But it shall be in the power of each Professor to propose to the University Court in any particular case that these payments may be remitted in whole or in part. 2. In all matters of discipline the Research Student shall be under the control of the Professor in whose laboratory he works. 3. All papers arising out of work done in a laboratory shall be submitted to the Professor before publication, and in all such publications a due recognition of the laboratory shall be inserted.

VII. The title of Research Fellow may be conferred by the Senatus Academicus, with the approval of the University Court, on Research Students who have shown special distinction. Such title shall not of itself confer any right to stipend, but it shall be in the power of the University Court to provide a stipend of such amount and for such period as it may think fit to any Research Fellow under the powers of Ordinance No. 25, Section XI., sub-section 8.

- VIII. (1) The Research Fellows shall be appointed as aforesaid after consideration of the report or reports submitted in terms of Section IV. hereof.
- (2) The title of Research Fellow may be conferred either at the commencement of the Research Student's course of study or research, or at any time during its progress, as the *Senatus Academicus* may determine.
- (3) Research Fellows shall retain their title and stipend, if any, for the period during which they are engaged in special study or research in the University, and no longer.
- (4) Research Students who have been appointed Research Fellows shall continue to be subject to the conditions above prescribed as to the supervision of their work and the reports to be made thereon.

IX. Nothing herein contained shall prejudice the right of Research Students to such Fellowships, Scholarships, or Prizes as may be open to them by Ordinance or Deed of Foundation.

X. The University Court may, subject to the provisions of Ordinance No. 25, Section XI., sub-section 8, provide such sums as it may think fit in aid of the expenses of special study or research.

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#### RESEARCH WORK IN 1906-07.

##### *Research Students.*

Hamilton C. Marr, M.D.—Enquiry into the nature of the Cerebro-Spinal fluid with special reference to Nervous Disease.

Kali C. Nandi, B.A., B.E. (Calcutta)—Armatures in direct current machines.

Thomas D. Mackenzie, B.Sc.—(1) Changes occurring in Uranium during radio-active change; (2) Nature of the electrical conduction of monatomic gases.

Alexander D. Ross.—Investigation of the magnetic properties of the Heusler Alloys.

William K. Hutton, M.A., M.B., C.M.—The cranial characteristics of the Scottish race.

Thomas S. Patterson, Ph.D. (Heidelberg), B.Sc. (London).—The optical activity of organic compounds.

Léon Pitoy, L.-ès-L. (Paris).—Reciprocal influences of English and French Literature in the Eighteenth Century.

Rudolf Freiherr von Hirsch, Ph.D. (Munich).—The nature of a gas generated under the action of cathode-rays.

Edward P. Cathcart, M.D., Ch.B.—Concerning several of the factors which influence Proteid Metabolism.

R. Bruce Young, M.A., M.B., C.M.—On the Anatomy of the Joints.

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#### SPECIAL TEACHING BY SCHOLARS AND FELLOWS IN 1906-7.

William Manson, M.A. (*G. A. Clark Scholar*)—Winter: Tutorial work in Honours Latin Class; Special Latin Prose Class; Summer: Special course of Lectures to Greek Class.

Archibald A. Bowman, M.A. (*G. A. Clark Scholar*)—Lectures on Greek Philosophy to Honours Logic Class.

William Miller, M.A., B.Sc. (*G. A. Clark Scholar*)—Tutorial work in Classes of Mathematics and Natural Philosophy.

Robert Dewar, M.A. (*G. A. Clark Scholar*)—Five Special Lectures to Honours English Class.

Henry M. Trafford, M.A. (*Eglinton Fellow*)—Winter: Special course of Lectures on Berkeley to Logic Class; Summer: Special course of open Lectures.

Robert K. Goodfellow, M.A. (*Euing Fellow*)—Winter: Latin Prose Class at Queen Margaret College; Summer: Lectures to Honours Greek Class.

Robert A. C. Macmillan, M.A. (*Euing Fellow*)—Winter: Tutorial work in Moral Philosophy Class.

Elizabeth G. Morison, M.A. (*Euing Fellow*)—Tutorial work in Mathematics at Queen Margaret College.

John R. Cameron, M.A. (*Luke Fellow*)—Lectures on Spenser to English Class.



*VII.—THE CARNEGIE TRUST FOR THE UNIVERSITIES OF SCOTLAND.*

This Trust was created by Mr. Andrew Carnegie of New York, and of Skibo in the County of Sutherland. By a trust-deed dated 7th June, 1901, Mr. Carnegie conveyed to Trustees \$10,000,000 Bonds by the United States Steel Corporation, bearing interest at 5 per cent., and directed that one-half of the net income should be applied towards the improvement and expansion of the Universities of Scotland in the Faculties of Science and Medicine, also for improving and extending the opportunities for scientific study and research, and for increasing the facilities for acquiring a knowledge of History, Economics, English Literature, and Modern Languages, and such other subjects cognate to a technical or commercial education as can be brought within the scope of the University curriculum, by the erection and maintenance of buildings, laboratories, class-rooms, museums or libraries, the providing of efficient apparatus, books, and equipment, the institution and endowment of Professorships and Lectureships, including post-graduate Lectureships and Scholarships, more especially Scholarships for the purpose of encouraging research, or in such other manner as the Executive Committee of the Trustees might from time to time decide.

It is directed that the other half of the income, or such part thereof as in each year may be found requisite, shall be devoted to the payment of the whole or part of the ordinary class fees exigible by the Universities from students of Scottish birth or extraction, and of 16 years of age or upwards, or scholars who have given two years' attendance after the age of 14 years at such schools and institutions in Scotland as are under inspection by the Scotch Education Department. They must have passed the examination qualifying for admission to the classes for which payment of fees is to be made by the Trust. Applications for the payment of fees must be made in the form prescribed by the Committee. The decision of the Committee in all questions of qualification shall be final, and the fees of all applicants declared to be eligible shall in each case be paid by the Committee as they become due to the factors or authorised officers of the Universities. The Committee shall

also have power to withhold payment of fees from any student who is guilty of misconduct, or who fails within a reasonable time to pass the ordinary examinations of the University or any of them. Any surplus remaining in any year from the income applicable to this head of expenditure shall be applied to the first head of expenditure. Extra-mural Colleges, Schools, or classes in Scotland, attendance at which is recognised as qualifying or assisting to qualify for graduation shall, on application, be entitled to participate under the first head of expenditure to such an extent as the Committee may from time to time determine, and the students thereof shall be admitted to the privileges of the second half. In the case of schools or institutions in Scotland established to provide technical or commercial education, the Committee may recognise classes which, though outside the present range of a University curriculum, can be accepted as doing work of a University level, and may allow them and the students thereof to participate under both heads of expenditure to such an extent as the Committee may from time to time determine.

Any surplus income which may remain after satisfying the preceding requirements is to be at the disposal of the Committee, who may expend it (1) in establishing or assisting to establish courses of lectures in convenient centres by Professors or Lecturers of the Universities or Extra-mural Colleges or Schools, in Science and the subjects before-mentioned; or (2) for the benefit of evening classes of students engaged in industrial or professional occupations during the day; or (3) in any other way the Trustees may think proper towards furthering the usefulness of the Universities in connection with the purposes expressed in the trust-deed and constitution. The benefits of the Trust are available to students of both sexes.

The Trustees are partly nominated, and there are also *ex officio* and elected members. The following are the nominated members:

The Right Hon. the Earl of Elgin and Kincardine, K.G., P.C., G.C.S.I., G.C.I.E., D.C.L., LL.D., *Chairman*.

The Right Hon. the Earl of Rosebery, K.G., P.C., K.T., D.C.L., LL.D., F.R.S.

The Right Hon. Lord Balfour of Burleigh, P.C., K.T., LL.D.

The Right Hon. Lord Kelvin, P.C., G.C.V.O., D.C.L., LL.D., F.R.S.

The Right Hon. Lord Kinnear of Spurness, one of the Senators of the College of Justice.

The Right Hon. Lord Reay of Reay, G.C.I.E., G.C.S.I., D.C.L., LL.D.

The Right Hon. Arthur James Balfour, M.P., D.C.L., LL.D.

The Right Hon. Sir Henry Campbell-Bannerman, M.P., G.C.B., LL.D.

The Right Hon. James Bryce, M.P., D.C.L., LL.D.

The Right Hon. John Morley, M.P., D.C.L., LL.D., F.R.S.

Sir Robert Pullar.

Sir Henry Enfield Roscoe, D.C.L., LL.D., F.R.S.

The Right Hon. Richard Burdon Haldane, P.C., K.C., M.P., LL.D.

The Right Hon. Thomas Shaw, P.C., K.C., M.P.

The following are the *ex officio* members :

His Majesty's Secretary for Scotland.

The Lord Provost of Edinburgh.

The Lord Provost of Glasgow.

The Provost of Dunfermline.

The elected members are four in number, one chosen by the University Court of each of the four Scottish Universities. They hold office for periods of four years, and are at present Principal Donaldson (St. Andrews), Professor Stewart (Glasgow), Professor Hay (Aberdeen), and Principal Sir William Turner (Edinburgh).

The administration of the Trust is conducted by an Executive Committee of nine members, one of whom is the Chairman of the Trust. Two of the four Trustees elected by the Universities are members of the Executive Committee for the first two years, the other two for the next two years, and so on.

The Executive Committee for the Academic year 1907-8 is as follows :

The Earl of Elgin and Kincardine, K.G., P.C., *Chairman*.

Lord Balfour of Burleigh, P.C., K.T.

Lord Kinnear of Spurness, K.C., LL.D.

Sir Henry Enfield Roscoe, D.C.L., LL.D.

Thomas Shaw, K.C., P.C., M.P.

The Lord Provost of Edinburgh, or an assessor nominated by him, after consultation and with the consent of the Trustees.

The Lord Provost of Glasgow, or an assessor nominated by him, after consultation and with the consent of the Trustees.

Principal Donaldson, LL.D., St. Andrews.

Professor Stewart, D.D., Glasgow.

The offices of the Trust are at the Merchants' Hall, Hanover Street, Edinburgh. *Secretary*, Dr. W. S. M'Cormick; *Treasurer*, Dr. John Ross. All applications should be addressed to the Secretary of the Trust.

The following excerpt from a letter written by Dr. Carnegie to the Earl of Elgin, Chairman of the Trust, explains the intention of the founder :—

“London, 7th June, 1901.

“My Dear Lord Elgin,

“As your Lordship is aware, my desire throughout has been that no capable student should be debarred from attending the University on account of the payment of fees. I believe that the conditions of application ensure a sufficient standard of merit, and I hope that the honest pride for which my countrymen are distinguished will prevent claims from those who do not require assistance, and that the invidious task of enquiring into the circumstances of each candidate need not be imposed upon the Trustees. But, to further mark my personal belief and hope in this matter, I have made provision in the Trust Deed that the Trustees may receive funds from others to be administered along with the funds placed by me. I consider this a valuable clause, believing, from my own experience with young men, that some students in after life may value the privilege of repaying advances received from the Trustees, although these are free gifts. I hope the Trustees will gladly welcome such repayments, if offered, as this will enable such students as prefer to do so to consider the payments made on their account merely as advances which they resolve to repay if ever in a position to do so, and that this will protect and foster the spirit of manly independence so dear to the Scot.

Very truly yours,

ANDREW CARNEGIE.”

## PAYMENT OF CLASS FEES.

The following are the regulations for beneficiaries of the Trust under its provisions for the payment of Class Fees :

I. AGE.—An applicant must be over sixteen years of age.

II. NATIONALITY.—An applicant must be of Scottish birth or extraction, or must have given two years' attendance after the age of fourteen at a school or institution under inspection of the Scotch Education Department.

∴ *The Executive Committee admit the claim of Scottish extraction in the case of an applicant who can give evidence of Scottish birth of one or other of his parents or grandparents.*

III. PRELIMINARY EDUCATION.—An applicant must have obtained the Leaving Certificate of the Scotch Education Department, or have passed the Arts or Science Preliminary Examination or its equivalent ; and he must also have passed any further entrance examination or examinations required by the Universities Joint Board for a complete curriculum qualifying for an ordinary degree in the Faculty in which he proposes to study.

IV. ORDINARY CLASSES.—An applicant shall not be eligible for payment of fees of classes belonging to a further stage of his curriculum until he has passed the graduation examinations belonging to a previous stage.

∴ *In the Faculty of Medicine the Executive Committee will make exceptional provision for cases where observance of this regulation is practically impossible.*

V. EXTRA-ORDINARY CLASSES.—An applicant shall not be eligible for payment of fees of other than ordinary qualifying classes until he has passed the ordinary graduation examination in the relative subject.

∴ *Special application forms for fees of advanced and honours classes will be supplied by the Secretary to applicants qualified under this regulation.*

VI. REPORTS OF ATTENDANCE AND WORK.—A beneficiary comes under an obligation to submit to the Executive Committee at the end of each session particulars as to his attendance and work, any distinctions he may have gained, and any graduation examinations he may have passed.

VII. CLASS CERTIFICATES.—A beneficiary also comes under an obligation to refund the fee of any class in which he has failed to obtain a certificate that he has given regular attendance and duly performed the work of the class during the session.

*∴ No payment will be made of fees of classes in which such certificates are not issued by the teacher.*

N.B.—The foregoing regulations are subject to revision by the Executive Committee at their meeting in July, 1907.

NOTE.—Applicants for Fees, in writing to the Secretary of the Trust for Application Forms, must name the University and Faculty in which they intend to study, and must state whether they have or have not previously obtained the benefits of the Trust.

### POST-GRADUATE STUDY AND RESEARCH.

An important part of the Trust's operations concerns the endowment of Post-Graduate Study and Research, and the Executive Committee have issued certain Regulations defining the purposes for which Scholarships, Fellowships, and Grants in aid of Research are offered, and setting forth the conditions under which they may be held. Nominations for Scholarships and Applications for Fellowships and Grants, must be lodged with the Secretary *not later than 1st May in any year*. The final award of the Executive Committee will be announced in due course; and all Scholarships, Fellowships, and Grants awarded in any year shall date from 1st October, unless expressly stated otherwise.

A student who intends to graduate at the close of the summer session or opening of the winter session may be nominated for a Scholarship, or may apply for a Research Grant on or before the 1st May preceding; but he shall not be eligible to receive either until he has graduated.

The following are the regulations :—

I. SCHOLARSHIPS.

(a) *In Science and Medicine.*

The Executive Committee are prepared to consider applications for Carnegie Scholarships in Science and Medicine on the following conditions :

I. A Scholar must be a graduate of a Scottish University who desires to devote himself to higher study and research in some department of science or medicine.

II. A Scholarship shall be of the annual value of £100, payable by quarterly instalments in advance, the second and subsequent instalments being payable on the receipt of a satisfactory report by the Scholar and certificate from the authority under whose supervision the Scholar has been working. The Executive Committee reserve power to suspend or withhold payment, if not satisfied with the progress or conduct of the Scholar.

A Scholarship shall not be held along with any other scholarship or position of emolument, except with the sanction of the Executive Committee.

In the event of a candidate holding or obtaining any other scholarship or position of emolument, the Executive Committee may, in place of granting or continuing to grant a Carnegie Scholarship, supplement the amount of such scholarship or emolument so as to bring the income up to at least £100, the candidate thereby ranking, and coming under the same regulations, as a Carnegie Scholar.

III. A Scholar shall ordinarily be expected to devote his whole time to the purpose for which the Scholarship is awarded. If he proposes to undertake other work during his tenure of the Scholarship, he must define such work precisely, and obtain the sanction of the Executive Committee.

IV. A Scholarship shall ordinarily be tenable for one year ; but it may be renewed for a second year, if the Executive Committee deem this expedient.

V. A candidate must be nominated by a Professor or Lecturer in a Scottish University, or by a Teacher in Scotland recognised for the purpose of graduation by a Scottish University, under whose supervision, unless other supervision be approved by the Executive Committee, he shall work during his tenure of the Scholarship.

The Nomination Form, to be signed by the nominator and the candidate, must contain information on the following points, all of which will be taken into consideration in estimating the relative claims of candidates :

(1) The age of the candidate, his career as a student, and his knowledge of modern languages.

(2) His special fitness for the work proposed.

(3) His programme of study and research during his tenure of the Scholarship, and where and under whose supervision he proposes to work.

(4) Whether the candidate proposes to undertake other work during his tenure of the Scholarship ; and, if so, the character of the work proposed, and the demand on his time which it will involve.

(5) Whether the candidate holds, or expects to hold, any other scholarship or position of emolument ; and if so, particulars of the amount and duration of such scholarship or emolument.

(6) The names of two or more authorities, other than the nominator, to whom the Executive Committee may refer as to the qualifications of the candidate.

The nominator must, if required, satisfy the Executive Committee that the candidate, if appointed to a Scholarship, will be provided with the facilities and supervision necessary for carrying out his programme of study and research, and that such information will be furnished on his progress and conduct as may seem expedient to the Executive Committee.

VI. By accepting a Scholarship a Scholar comes under an obligation to submit such reports on the progress of his work as the Executive Committee may require.

VII. Nomination Forms may be had from the Secretary to the Carnegie Trust, The Merchants' Hall, Hanover Street, Edinburgh, to whom all communications must be addressed.

*(b) In History, Economics, and Modern Languages and Literature.*

The Executive Committee are prepared to consider applications for Carnegie Scholarships in History, Economics, and Modern Languages and Literature on the following conditions:

I. A Scholar must be a graduate of a Scottish University, preferably with Honours in at least one of the Groups:



History, Economic Science, English, Modern Languages and Literature, who desires at home or abroad to devote himself to higher study and investigation within the scope of these groups of study.

II. A Scholarship shall be of the annual value of £100, payable by quarterly instalments in advance, the second and subsequent instalments being made payable on the receipt of a satisfactory report by the Scholar and certificate from the authority under whose supervision the Scholar has been working. The Executive Committee reserve power to suspend or withhold payment, if not satisfied with the progress or conduct of the Scholar.

A Scholarship shall not be held along with any other scholarship or position of emolument, except with the sanction of the Executive Committee.

In the event of a candidate holding or obtaining any other scholarship or position of emolument, the Executive Committee may, in place of granting or continuing to grant a Carnegie Scholarship, supplement the amount of such scholarship or emolument so as to bring the income up to at least £100, the candidate thereby ranking, and coming under the same regulations, as a Carnegie Scholar.

III. A Scholar shall ordinarily be expected to devote his whole time to the purpose for which the Scholarship is awarded. If he proposes to undertake other work during his tenure of the Scholarship, he must define such work precisely, and obtain the sanction of the Executive Committee.

IV. A Scholarship shall ordinarily be tenable for one year; but it may be renewed for a second year, if the Executive Committee deem this expedient.

V. A candidate must be nominated by a Professor or Lecturer in a Scottish University, under whose supervision, unless other supervision be approved by the Executive Committee, he shall work during his tenure of the Scholarship.

The Nomination Form, to be signed by the nominator and the candidate, must contain information on the following points, all of which will be taken into consideration in estimating the relative claims of candidates:

(1) The age of the candidate, and his career as a student, including particulars as to his general culture and his proficiency in the above-named groups of study.

- (2) His special fitness for the work proposed.
- (3) His programme of study and investigation during his tenure of the Scholarship, and where and under whose supervision he proposes to work.
- (4) Whether the candidate proposes to undertake other work during his tenure of the Scholarship ; and, if so, the character of the work proposed, and the demand on his time which it will involve.
- (5) Whether the candidate holds, or expects to hold, any other scholarship or position of emolument ; and if so, particulars of the amount and duration of such scholarship or emolument.
- (6) The names of two or more authorities, other than the nominator or nominators, to whom the Executive Committee may refer as to the qualifications of the candidate.

The nominator must, if required, satisfy the Executive Committee that the candidate, if appointed to a Scholarship, will be provided with the facilities and supervision necessary for carrying out his programme of study and investigation, and that such information will be furnished on his progress and conduct as may seem expedient to the Executive Committee.

VI. By accepting a Scholarship a Scholar comes under an obligation to submit such reports on the progress of his work as the Executive Committee may require.

VII. Nomination Forms may be had from the Secretary to the Carnegie Trust, The Merchants' Hall, Hanover Street, Edinburgh, to whom all communications must be addressed.

## II. FELLOWSHIPS.

### (a) *In Science and Medicine.*

The Executive Committee are prepared to consider applications for Carnegie Fellowships in Science and Medicine on the following conditions :

I. A Fellow must be a graduate of a Scottish University who has given evidence, preferably by work already published, of capability to advance science or medicine by original research, and who desires to devote himself further to this work.

II. A Fellowship shall be of the annual value of £150, exclusive of such special expenses in connection with his research as the Executive Committee may allow. Payment shall be made by half-yearly instalments in advance ; but the

Executive Committee reserve power to suspend or withhold payment, if not satisfied with the progress or conduct of the Fellow.

A Fellowship shall not be held along with any other fellowship or position of emolument, except with the sanction of the Executive Committee.

In the event of a candidate holding or obtaining any other fellowship or position of emolument, the Executive Committee may, in place of granting or continuing to grant a Carnegie Fellowship, supplement the amount of such fellowship or emolument so as to bring the income up to at least £150, the candidate thereby ranking, and coming under the same regulations, as a Carnegie Fellow.

III. A Fellow shall ordinarily be expected to devote his whole time to the purpose for which the Fellowship is awarded. If he proposes to undertake other work during his tenure of the Fellowship, he must define such work precisely, and obtain the sanction of the Executive Committee.

IV. A Fellowship shall ordinarily be tenable for two years, the extension to a second year being dependent on the receipt of a satisfactory report by the Fellow on his work during the first year; but it may be renewed for a third year, if the Executive Committee deem this expedient.

V. A candidate must furnish the Executive Committee with information on the following points, all of which will be taken into consideration in estimating the relative claims of candidates:—

(1) His age, his career as a student, and his knowledge of modern languages.

(2) His special fitness to conduct the research proposed, and his previous experience, along with any published accounts of work already done.

(3) His programme of research during his tenure of the Fellowship; where he proposes to work; and whether he proposes to work independently or in collaboration.

(4) Whether he proposes to undertake other work during his tenure of the Fellowship; and, if so, the character of the work proposed, and the demand on his time which it will involve.

(5) Whether he holds, or expects to hold, any other fellowship or position of emolument; and if so, particulars of the amount and duration of such fellowship or emolument.

(6) The names of two or more authorities to whom the Executive Committee may refer as to his qualifications.

(7) An estimate, as detailed as is possible, of special expenses, if any, required in connection with the research he proposes to undertake.

VI. By accepting a Fellowship a Fellow comes under an obligation to submit such reports on the progress of his work as the Executive Committee may require.

The publication, in some form, of an account of the results of his research will be expected in all cases.

VII. Application Forms may be had from the Secretary to the Carnegie Trust, The Merchants' Hall, Hanover Street, Edinburgh, to whom all communications must be addressed.

*(b) In History, Economics, and Modern Languages and Literature.*

The Executive Committee are prepared to consider applications for Carnegie Fellowships in History, Economics, and Modern Languages and Literature on the following conditions :

I. A Fellow must be a graduate of a Scottish University, preferably with Honours in at least one of the Groups: History, Economic Science, English, Modern Languages and Literature, who desires to investigate at first-hand, at home or abroad, some historical, social, economic, or educational problem or factor of modern civilisation, and who can give evidence by his previous career and general culture, and also preferably by work already published, of capability to advance knowledge by his proposed investigation.

II. A Fellowship shall be of the annual value of £150, exclusive of such special expenses in connection with his investigation as the Executive Committee may allow. Payment shall be made by half-yearly instalments in advance; but the Executive Committee reserve power to suspend or withhold payment, if not satisfied with the progress or conduct of the Fellow.

A Fellowship shall not be held along with any other fellowship or position of emolument, except with the sanction of the Executive Committee.

In the event of a candidate holding or obtaining any other fellowship or position of emolument, the Executive Committee may, in place of granting or continuing to grant a Carnegie

Fellowship, supplement the amount of such Fellowship or emolument so as to bring the income up to at least £150, the candidate thereby ranking, and coming under the same regulations, as a Carnegie Fellow.

III. A Fellow shall ordinarily be expected to devote his whole time to the purpose for which the Fellowship is awarded. If he proposes to undertake other work during his tenure of the Fellowship, he must define such work precisely, and obtain the sanction of the Executive Committee.

IV. A Fellowship shall ordinarily be tenable for two years, the extension to a second year being dependent on the receipt of a satisfactory report by the Fellow on his work during the first year; but it may be renewed for a third year, if the Executive Committee deem this expedient.

V. A candidate must furnish the Executive Committee with information on the following points, all of which will be taken into consideration in estimating the relative claims of candidates:—

(1) His age, and his career as a student, including particulars as to his general culture and his proficiency in the above-named groups of study.

(2) His special fitness to conduct the investigation proposed, and his previous experience, along with any published accounts of work already done.

(3) His programme of investigation during his tenure of the Fellowship; where he proposes to work; and whether he proposes to work independently or in collaboration.

(4) Whether he proposes to undertake other work during his tenure of the Fellowship; and, if so, the character of the work proposed, and the demand on his time which it will involve.

(5) Whether he holds, or expects to hold, any other fellowship or position of emolument; and if so, particulars of the amount and duration of such fellowship or emolument.

(6) The names of two or more authorities to whom the Executive Committee may refer as to his qualifications.

(7) An estimate, as detailed as is possible, of special expenses, if any, required in connection with the investigation he proposes to undertake.

VI. By accepting a Fellowship a Fellow comes under an obligation to submit such reports on the progress of his work as the Executive Committee may require.

A Fellow will be expected to submit for publication a thesis or memoir upon the results of his investigation.

VII. Application Forms may be had from the Secretary to the Carnegie Trust, The Merchants' Hall, Hanover Street, Edinburgh, to whom all communications must be addressed.

### III. GRANTS IN AID OF RESEARCH.

The Executive Committee are prepared to consider applications for Grants in aid of Research on the following conditions:—

I. An applicant for a Research Grant must be a Professor, Lecturer, or Assistant in a Scottish University, a Teacher in Scotland recognised for the purpose of graduation by a Scottish University, or a Scottish University Graduate resident in Scotland.

II. A Research Grant is not intended to take the place of such provision as the University Courts may make out of the Grants for Permanent Equipment under the Scheme of "Grants for five years to the four Universities of Scotland."

III. An applicant must furnish the Executive Committee with information on the following points, all of which will be taken into consideration in estimating the relative claims of applicants:—

(1) His experience in research, with copies of or references to any published papers, or, if he has no papers to offer, with references to two or more authorities who are acquainted with his qualifications.

(2) The nature of the research in which he desires to engage, and the results expected to follow therefrom.

(3) The period over which the proposed research is likely to extend, and the approximate amount of time which he expects to be able to devote to it.

(4) A statement of special requirements for the proposed research, with a detailed estimate of the cost.

(5) Whether he has received, or is receiving, any grant from any other source for the same object; and if so, what results have already ensued from his investigations.

IV. By accepting a Grant an applicant comes under an obligation to send to the Executive Committee, when required, a report containing—(a) a brief statement (not necessarily for

publication) showing the results arrived at, or the stage which the inquiry has reached; (b) a statement of the expenditure incurred; and (c) copies of or references to any papers in which results of the research have been printed.

The publication, in some form, of an account of the results of the research will be expected in all cases. In the publication of any work for which financial assistance has been received from the Trust, due acknowledgment of such assistance shall be made, and Scholars and Fellows under this Scheme shall use the title "Carnegie Research Scholar" and "Carnegie Research Fellow" respectively.

V. Instruments of permanent value purchased by means of the grant shall, at the conclusion of the research or at such other time as the Executive Committee may determine, be placed under the care and at the disposal of the institution in which the research has been conducted, provided that the Executive Committee may, if they see fit, request their return.

All apparatus of permanent value provided by the Trust for purposes of research shall be labelled and catalogued as belonging to the Trust, and an account of such apparatus shall be sent annually to the Executive Committee.

VI. An application for a Grant to two or more collaborators in the same research must be signed by each; but they shall appoint one of their number who shall be responsible for furnishing the report, for receiving and disbursing the money, and in general for the conduct of the research.

VII. Application Forms may be had from the Secretary to the Carnegie Trust, The Merchants' Hall, Hanover Street, Edinburgh, to whom all communications must be addressed.

The following Graduates of Glasgow University have been appointed to Carnegie Scholarships and Fellowships:—

*Scholars*:—1903—Thomas B. Morley, B.Sc. (Physical); Alexander Matheson, M.A., B.Sc., M.B., Ch.B. (Pathological); M. Logan Taylor, M.B., Ch.B. (Pathological). 1904—Robert T. Leiper, M.B., Ch.B. (Biological); Janie H. M'Ilroy, M.A., B.Sc., M.B., Ch.B. (Pathological); William G. Rodger, M.B., Ch.B. (Pathological). 1905—Thomas D. Mackenzie, B.Sc. (Chemical); Robert D. Watt, M.A., B.Sc. (Agricultural); Muriel Robertson, M.A. (Biological); Janie H. M'Ilroy,

M.A., B.Sc., M.B., Ch.B. (Pathological); Ivy M'Kenzie, M.A., B.Sc., M.B., Ch.B. (Pathological); Constance H. M. Archibald, M.A. (Economical). 1906—Neil M'Arthur, M.A., B.Sc. (Physical); Thomas D. MacKenzie, B.Sc. (Chemical); David Thomson, M.A. B.Sc. (Chemical); Muriel Robertson, M.A. (Biological); Robert D. Watt, M.A., B.Sc. (Agricultural); Ivy M'Kenzie, M.A., B.Sc., M.B., Ch.B. (Pathological); William P. M'Pherson, B.Sc. (Pharmacological); W. Blair M. Martin, M.B., Ch.B. (Pathological); Elizabeth T. Talbert, M.B., Ch.B. (Physiological); George S. Gordon, M.A. (Historical).

*Fellows*:—1904—Dongald B. M'Quistan, M.A., B.Sc. (Physical). 1905—Carl H. Browning, M.B., Ch.B. (Pathological); Dongald B. M'Quistan, M.A., B.Sc. (Physical); Alfred Walter Stewart, B.Sc. (Chemical). 1906—Alfred Walter Stewart, B.Sc. (Chemical); Carl H. Browning, M.B., Ch.B. (Pathological); Constance H. M. Archibald, M.A. (Economical).

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#### PUBLISHED WORK.

The following papers by Graduates of Glasgow University working under the Carnegie Research Scheme have been published:

THOMAS B. MORLEY, B.Sc. (Scholar, 1903-4).

Tests of de Laval steam-turbine. *Engineering*, Dec. 29, 1905, pp. 880-2. 3 pp., 1905.

JANIE H. M'ILROY, M.A., B.Sc., M.B., Ch.B. (Scholar, 1904-5 and 1905-6).

On the presence of elastic fibres in the cornea. *Jour. Anat. and Physiol.*, Vol. XL, pp. 282-91. 2 plates, 10 pp., 1906.

MURIEL ROBERTSON, M.A. (Scholar, 1905-6).

Notes on certain blood-inhabiting protozoa. *Proc. Roy. Phy. Soc. Edin.*, Vol. XVI., No. 6, pp. 232-247. 2 plates, 16 pp., 1906.

Notes on certain parasitic protozoa from the groups of the myxosporidia and hemosporidia. *Roy. Phil. Soc. Glasg.*, Vol. XXXVII. 1 plate, 6 pp., 1906.



ROBERT D. WATT, M.A., B. Sc. (Scholar, 1905-6).

On the evolution of gas during churning. *Jour. Agric. Sci.*, Vol. II., Pt. I., pp. 97-100. 4 pp., 1907.

IVY McKENZIE, M.A., B.Sc., M.B., Ch.B. (Scholar, 1905-6).

Pulmonary changes in Asphyxia. *Jour. Anat. and Physiol.*, Vol. XL., pp. 120-32. 13 pp., 1906.

Broncho-pneumonia and abscess of lung. *Glasg. Med. Jour.*, April 1906, pp. 257-77. 21 pp., 1906.

Calculus in ureter and sepsis. *Brit. Jour. Children's Dis.*, Aug. 1906. 7 pp., 1906.

CARL H. BROWNING, M.B., Ch.B. (Fellow, 1904-5 and 1905-6).

Observations on the development of the granular leucocytes in the human foetus. *Jour. Path. and Bacter.*, Jan. 1905, pp. 145-58. 1 plate, 14 pp., 1905.

A case of mixed-cell leukaemia, with a short account of recent views on atypical leukaemias. *Lancet*, Aug. 19, 1905. 9 pp., 1905.

Agglutination und Komplementschwund. *Wien. klin. Wochenschr.*, Nr. 15. 11 pp., 1906.

(With Prof. Robert Muir)—On the action of complement as agglutinin. *Jour. of Hygiene*, Vol. VI., No. 1., pp. 20-2. 3 pp., 1906.

On the properties of anti-immune-bodies and complementoids. *Jour. of Hygiene*, Vol. VI., No. 1, pp. 1-19. 19 pp., 1906.

(With Dr. H. Sachs)—Ueber Antiamboceptoren. *Berl. klin. Wochenschr.*, 1906, Nr. 20 u. 21. 18 pp., 1906.

ALFRED W. STEWART, B.Sc. (Fellow, 1905-6).

The relation between absorption spectra and chemical constitution.

Part I. (with E. C. C. Baly)—The chemical reactivity of the carbonyl group. Part II. (with E. C. C. Baly)—The  $\alpha$ -diketones and quinones. Part III. (with E. C. C. Baly and W. H. Edwards)—The nitroanilines and the nitrophenols. Part IV. (with E. C. C. Baly)—The reactivity of the substituted quinones. Part V. (with E. C. C. Baly and E. G. Marsden)—The isonitroso-compounds. *Trans. Chem. Soc.*, Vol. LXXXIX. 73 pp., 1906.

# VIII.—LIBRARIES, MUSEUM, BOTANIC GARDEN.

## UNIVERSITY LIBRARY.

The University Library was founded in the fifteenth century. It contains an extensive and valuable collection of books. The Librarian is appointed by the University Court. The Library is under the immediate superintendence of a Committee consisting of three members of the University or others, not being members of Senate, appointed by the University Court, and of six members of Senate appointed by the Senate. All reports by this Committee are, in the first instance, received by the Senate, and the Senate has power, subject to the review of the University Court, to confirm, modify, or reject the recommendations in such reports.

The Library is always increasing by donations and by a grant of £707 per annum, formerly paid by the Treasury, as compensation for the loss of the Stationers' Hall privilege, and now received from the University Court. It receives also a grant of £100 annually for scientific periodicals from the Bellahouston Trustees. The Carnegie Trust has allocated to the library a grant of £1000 for each of the five years from 1st January, 1903.

During recent years the Library has acquired several valuable collections. Amongst these the most important are the following:—

The Collection bequeathed to the University by the late W. EUING, Esq., amounting to about 15,000 volumes. It contains many books printed in the fifteenth and sixteenth centuries, illustrated books, English literature, Classics, above 2,000 Bibles, and a very large number of Psalm and Hymn books.

The library of the late SIR WILLIAM HAMILTON, Professor of Logic in the University of Edinburgh, amounting to about 8,000 volumes. This collection, which consists principally of Classics, editions of Aristotle, and treatises on Logic and Metaphysics, was purchased by private subscription and presented to the University. A list of the subscribers was inserted in the *Calendar* for 1879-80.

The WALKER-ARNOTT Botanical library of 970 volumes.

The Musical library of the late THOMAS L. STILLIE, Esq., numbering 760 volumes. It contains the works of the chief

composers, many of them in score, and an extensive series of modern operatic compositions, continental and English.

The collection of books on Palestine, which belonged to the late DR. A. B. M'GRIGOR, consisting of 655 volumes of works, illustrating the natural and civil history, topography, and antiquities of Jerusalem and the Holy Land. This collection was presented along with 83 volumes, containing about 1,000 pamphlets, by Alexander M'Grigor, Esq.

The library of the REV. A. K. MACCALLUM, LL.D., containing over 3,000 volumes, bequeathed to the University—along with an annual sum of £10 to be spent on its increase—as the nucleus of a Celtic library.

A collection of works, numbering over 600 volumes, relating to Mediaeval Philosophy, which formed part of the library of the late PROFESSOR VEITCH—presented by Mrs. Veitch.

A selection, consisting mainly of theological works and amounting to about 3,800 volumes, from the library of the late REV. ALEXANDER ROBERTSON, who also left the residue of his means to found a lectureship in the University in defence of the Christian religion; 800 volumes of general literature from the library of the late F. A. ECK, Esq.; over 1,000 volumes—selected from the library of the late JAMES HOTSON, merchant—presented by DR. THOMAS REID; 700 volumes, including extensive histories of the Netherlands, books on universities and schools, and many theological works, presented by Professor J. E. B. MAYOR, D.D.; a complete copy of Migne's *Patrologia* in 388 volumes, presented along with an oak book-case by the subscribers as a memorial of the late Dr. W. P. DICKSON, Curator of the Library; about 500 volumes from the library of the late Professor HASTIE, D.D.; and 674 Volumes (including 60 Volumes containing 1121 Pamphlets) published at the University Press—presented by JAMES MACLEHOSE, M.A., F.S.A.

The custody and management of the Library are regulated by Ordinance No. 64, and by the rules framed under that Ordinance and approved by the University Court on 14th November, 1895. The following are the principal regulations relative to the use of the Library:—

Books shall not be given out except to the borrower in person, or to some one having written authority from him.

It shall be in the power of the Librarian at any time to withdraw any

work from circulation, subject to appeal to the Library Committee; and to call in any book from any borrower after the lapse of the period for which such borrower is entitled to retain it, upon receiving a written request to do so from any person entitled to the use of the Library. In the notice of recall a period of not less than three clear days shall be allowed for making the return, and the penalties leviable for neglect shall be specified in the notice.

The following classes of work, viz.:—Manuscripts, rare books or books in any way difficult to be replaced, works of reference, separate maps or plates, unbound music or parts of works, pamphlets or books not sufficiently protected by the binding, shall not be given out except on an order of, and under conditions to be fixed by, either (a) the Senate, (b) the Library Committee, or (c) three Members of the Library Committee, according as, in the discretion of the Librarian, the special circumstances of each case may require.

Each member of the following classes of readers shall be allowed to borrow, and to have in his, or her, possession at one time the under-mentioned number of volumes, but not more:—

Each Member of the *Senatus Academicus*, thirty volumes.

Each University Lecturer, twenty volumes.

Each Assistant and Examiner, and each holder of a Teaching Fellowship, fifteen volumes.

The Librarian, ten volumes; and each Assistant-Librarian, five volumes.

Each Extra-Academical Teacher, recognized by the University Court, in the town in which the University is situated, ten volumes.

Each retired Principal or Professor, ten volumes.

Each Member of the University Court, during his tenure of office, ten volumes.

Each Member of the General Council of any Scottish University (and each Graduate under the age of twenty-one years) in each year in which he, or she, shall have paid a subscription to the Library of ten shillings and sixpence, six volumes.

Provided that no Member of the University Court or of the General Council shall be entitled to obtain from the University Library books required by the teachers or students of the University in the prosecution of academic work and research, and that it shall be in the discretion of the Librarian, subject to appeal to the Library Committee, to decide from time to time what books are so required.

Any Member of the General Council of any Scottish University shall be allowed to compound for the Library subscription by a single payment of Five Guineas, which shall secure to him, or her, for life the same privileges as would accrue from the annual payments.

It shall be in the power of the Library Committee from time to time to grant the use of the Library to persons who may not be Members of the University, for purposes of literary research, and the names of those privileged readers shall be reported annually to the University Court. All grants under this section shall terminate with the close of the

reading year, but shall be renewable if again applied for. Each special reader shall pay an annual subscription of ten shillings and sixpence, and shall be entitled to borrow six volumes at one time, but not more.

Subject always to the provision as to the return of books for the annual inspection, all persons entitled to the use of the Library under the foregoing regulations shall have the right to retain each book borrowed during the winter session for one month, and each book borrowed during the summer session for two months, from the date of borrowing; and may further retain each book until it shall have been recalled by the Librarian.

Every Matriculated student, or other Student admitted by ordinance to the use of the Library, shall be entitled to have in his, or her, possession at one time, during the winter session, four volumes but not more, and during the summer session and vacation, six volumes but not more. Every student shall have the right—subject to the return of books for the inspection—to retain any book during the winter session for two weeks, and during the summer session for four weeks, from the date of borrowing, and may further retain each book until it shall have been recalled by the Librarian. But no student shall be permitted to borrow any book from the Library until he, or she, shall have lodged with the Librarian a deposit of £1 in security for the due return of the books and the payment of any fines which may be incurred.

During the winter session such students only as are attending the English Literature classes shall be allowed to borrow works of fiction in English, and then only to the extent of two volumes at one time. During the summer session and vacation students may borrow three volumes of fiction at one time, but not more.

The reading term for Students, Members of General Council, and Special Readers, shall begin with the commencement of the winter session in each year, and terminate with the close of the autumn vacation following.

Readers shall not be allowed to borrow books in more than one capacity.

A general inspection of the Library shall take place in April, beginning with the seventh, and continuing for eight lawful days thereafter.

All works whatever, and by whomsoever borrowed, shall be returned to the Library before the beginning of the period of the annual inspection under the penalties hereinafter mentioned. The Library shall be wholly closed during the time of the inspection.

If any person shall retain any volume after the commencement of the period of the annual inspection, such person shall incur a fine of one shilling for each volume; and in the event of any volume not being returned before the close of one week after the last day of the inspection, the fine shall be repeated from week to week until the volume is returned, or until the total amount of the fine shall have reached the sum of ten shillings.

If any person, when required by the Librarian to return a book, shall fail to do so before the expiry of the time specified in the notice, such person shall incur a fine of one shilling for each volume, and thereafter a further penalty of sixpence per day so long as the volume is not returned,

or until the total amount of the fine shall have reached the sum of ten shillings.

The Librarian is instructed forthwith to report to the Library Committee all cases in which he shall find that books have been mutilated, disfigured by writing on the margin, or otherwise injured, while in the possession of readers; and persons guilty of such offences shall be liable to replace the injured books, and shall be fined or suspended from the privileges of the Library at the discretion of the Committee.

So long as any Library subscription or any fine incurred remains unpaid, and so long as any person continues in possession of a book which he is not entitled to retain, the right of the defaulter to the use of the Library shall be suspended and remain in abeyance.

All readers borrowing books from the Library must obtain them from, and return them to, the Assistant-Librarians in the ante-room on the days and during the hours when the Library is open.

Persons other than students who wish to consult books in the Library will be accommodated in the First Bay of the Lower Hall.

Visitors on giving their names will be conducted over the Library by an attendant.

The Library is open for the borrowing and return of books on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays from 10 till 5 o'clock, except during the months of July and August when it is open from 10 till 2. On Saturdays it is open from 10 till 1, except in the months of July and August when it is wholly closed. The Library is closed during the time of the Annual Inspection in April. During the Christmas holidays it is open from 10 till 3 o'clock, except on Christmas and New Year's Days and on Saturdays.

Additional Regulations approved by the University Court, viz. Nos. 1, 2, 3, 4 on 1st October, 1903, and No. 5 on 2nd November, 1905:—

1. The members of the Court, the Library Committee and the Teaching Staff and all readers (other than matriculated students) entitled to borrow books without payment of subscription, shall have the privilege of free access to the open shelves and to the recent numbers of current periodicals, during the hours when the Library is open.

2. Similar free access shall also be given to matriculated Research Students and to such Carnegie Scholars and Fellows as become members of the University, provided in all cases that they shall have first become readers in the Library and made the usual deposit.

3. The same privileges may be granted to a limited number of matriculated Students who shall be specially recommended to the Library Committee as likely to make a good use of them, on the following conditions:

(a) The recommendation shall be in writing. It must be signed by a University Professor or Lecturer and bear that it is based on personal knowledge. All recommendations shall cease to be valid at the end of the Autumn Vacation.

(b) No recommended Student shall be admitted to free access unless he is a member of the Library, and has made the usual deposit.

4. Members of the Library Committee and readers under the second of these Additional Regulations shall be allowed to borrow ten volumes at one time, but not more.

5. The privilege of free access to the interior of the Library may be granted by the Library Committee to a limited number of members of the General Council, who are readers in the Library, provided they have satisfied the Convener that they are engaged in such special study as would make the use of the privilege an important advantage to them. The grant in this case shall not expire with the close of the autumn vacation.

The following regulations made by the Library Committee in regard to borrowing books from the Simson and the Hamilton collection, were reported to the Senate on 1st December, 1904 :—

Subject to the general restrictions upon, and regulations regarding, the borrowing of books from time to time in force—

(1) No book shall be lent out of the Simson Collection without an express order, in writing, of the Library Committee.

(2) Any Professor, Lecturer, or University Assistant in the Department of Mental Philosophy in the University shall be entitled to borrow from the Hamilton Collection, on presenting a requisition in writing to the Librarian for the book or books wanted

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### CATALOGUES.

The General Alphabetical Catalogue may be consulted in the Catalogue Room by Readers, on application to the Librarian.

Students and Graduates who are engaged in special research may, on similar application, have access to the Classified Catalogues. These catalogues were arranged by the late Professor Dickson, who held the office of Curator of the Library, and the expenses incurred by him in connection with their preparation were defrayed by the late Dr. A. B. McGrigor.

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### READING-ROOM.

In connection with the Library, a Reading-Room, provided with a special collection of books of reference for the use of Matriculated Students, is open for readers, Saturdays and holidays excepted, during the winter session from 9 A.M. till 4 P.M., and during the summer session from 9 A.M. till 2 P.M.

The Room is primarily intended for readers consulting the books of the Special Collection ; but, so far as the accommodation will allow, students may make use of it for individual private study. The following are the principal rules applicable to the Room :—

Every Matriculated Student who shall at the beginning of the session or thereafter record (in a book kept by the Librarian) his desire to use the Reading-Room in accordance with the rules for consulting of books or private study, will receive a voucher entitling him to admission. No student will be admitted to the use of the Room without possessing a voucher.

All readers are required to abstain from talking, whispering, or any other form of distracting or disturbing others, and to enter and leave the Room (and Vestibule) with as little noise as possible. Readers shall exhibit their vouchers when asked ; and shall at once give their names and matriculation numbers, if they shall be requested to do so.

Each student, desirous of borrowing books from the Special Collection in the Vestibule, is required to fill up one of the receipt papers with his name, matriculation number, and the title of the book or books wanted, and to present it to the Assistant-Librarian in charge. Students are not permitted to have the use of more than two volumes at one time. The books received are to be used only in the Reading-Room, and are to be returned by the receiver himself into the hands of the Assistant-Librarian. The return of books by those who have to leave the room at the end of any hour is to be made not later than five minutes before that time, and during that interval no books will be given out.

Books of reference not included in the Special Collection, but contained in the General Library, may be obtained for consultation in the Reading-Room on presenting a paper with the name and matriculation number of the reader making the request, and the title of the book wanted, to one of the Assistant-Librarians in the Library.

The Assistant-Librarian in charge, Mr. William G. Macdonald, is instructed to report at once to the Library Committee the name of any student transgressing the rules.

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### *Donations to the University Library.*

List of Donations from 1st March, 1906, to 28th February, 1907.

Aberdeen University.—Handbook to City and University.—Studies in Pathology.—Proceedings of the Aberdeen University Anatomical and Anthropological Society. 1904-6.—Studies in the history of the University.—Studies in the Eastern Roman Provinces.—Johnston, Roll of Graduates, 1860-1900.

Aberdeen University Press.—The Voice of the year. III. 3.  
Academia Polytechnica do Porto.—Annaes scientificos. 1. 2.



- Mr. W. Innes Addison.—Register of Members of the General Council. 1907.
- The Admiralty.—Statistical Report on the Health of the Navy. 1905.
- Agricultural Research Institute, Pusa, Bengal.—Memoirs of the Department of Agriculture in India. Botanical series. 1. 1-3.—Memoirs of the Department of Agriculture in India. Entomological series. 1. 1.
- Geo. A. Allan, M.B., and John S. Dunn, M.B.—The clinical and pathological aspects of a fulminating case of cerebro-spinal meningitis.
- James W. Allan, M.B., C.M.—Post-graduate demonstration in Ward 2, Glasgow Royal Infirmary, 17th May, 1906.—Post-graduate demonstration in Ward 1, Glasgow Royal Infirmary, 3rd May, 1906.
- Alliance of Reformed Churches.—Quarterly Register. VII. 11.
- American Historical Association.—Annual Report. 1905. Vol. 1.
- American Osteopathic Association.—Journal for the year 1906-7.—Case reports. III. and V.—Directory of Members. March, June, 1905.
- American Philosophical Society.—The record of the celebration of the two hundredth anniversary of the birth of Benjamin Franklin, under the auspices of the American Philosophical Society. Vol. 1.
- Professor R. J. Anderson, M.D.—Muscular action, Racial types in Connaught, Reclus system of mapmaking, Annual coloration, Relation of Land to Sea in Connaught, Drift of Galway, the Re-union.
- W. Carrick Anderson, D.Sc.—The Physical Laboratories of the University of Manchester. 1906.
- M. Auguste Angellier, Lille.—Dans la lumière antique.
- Archaeological Survey of India.—Report. 1906.
- Miss Helen M. Armour, M.A.—On the Morphology of *Chloranthus*.
- Army Council.—Army Medical Department.—Report for the year 1904.
- Dr. S. T. Armstrong.—Transactions of the Association of Hospital Superintendents. Seventh annual conference, Boston, Mass.
- Asiatic Society of Bengal.—Bibliotheca Indica. X.S. Nos. 1128-1138, 1145-1148.—Report on the search for Sanskrit Manuscripts, 1901-06. By M. H. Shastri.
- Mr. Allan F. Baird.—Legislation protecting children.
- Mr. Edwin Swift Balch, Philadelphia.—Comparative Art.
- Bellevue and Allied Hospitals, New York.—Third and Fourth Annual Reports. 1904 and 1905.
- Berwickshire Naturalist Club.—Proceedings. XIX. 2.
- Mr. H. Beveridge.—The Churchyard memorials of Crail: the History of Humayun, translated by Mrs. Annette S. Beveridge: Bell, Poems.
- Professor Shridhar R. Bhandarkar, M.A.—The present condition of Sanskrit Studies in India.
- Biblioteca comunale di Bologna.—Bollettino. I. 1.
- Bibliothèque royale de Belgique. Liste des ouvrages imprimés acquis en 1906.
- Bibliotheca da Universidade de Coimbra.—Archivo bibliographico. VI.
- R. Biblioteca nazionale centrale di Firenze.—Bollettino delle pubblicazioni italiane, for the year 1906-7.
- Bibliothèque de l'Université d'Utrecht.—50 Dissertations and Theses. 1905-6.
- Mr. Matthew Blair.—The Paisley Thread Industry.
- Board of Education, South Kensington.—List of Samplers in the Victoria and Albert Museum.—Regulations for Technical Schools, and other schools. 1906-7.—Regulations relating to the Royal College of Science. 1906-7.—Syllabuses and lists of apparatus. 1906-7.—Courses of work in rural evening schools.—Statistics of Public Education in England and Wales. 1904-6.—Report. 1905-6.—Return, Higher education, England and Wales. 1903-4.—Bushell, Chinese Art. II.—Science examinations. 1906.—Art examinations. 1906.—List of Candidates who were successful at the Science Examination. April, May, and June, 1906, etc.—Science Examination papers. 1906.—Art Examination papers. 1906.—Report for the year 1904 on the Victoria and Albert Museum, etc.—National Competition. 1906.—Return, Higher Education, England and Wales. (Application of funds by local authorities.) 1904-5.
- Board of Education, Washington.—Report of the Commissioner of Education. Vol. II. 1904.
- Bohemian Society of Clinical Medicine.—Archives. VII. 5.
- Mr. John V. V. Booraem, M.E.—Internal energy. 1st Edition.

- Boston Public Library.—Annual list of books added to the Library. 1905-6.—  
Monthly bulletin of books added to the public Library for the year 1906-7.
- Botanical Society of Edinburgh.—Transactions and Proceedings. XXIII. 2.
- Professor Émile Boutroux.—Annuaire de la Fondation Thiers. 1902-3, 1904. Nouvelle série.
- Professor Bower, F.R.S.—Disraeli, Curiosities of Literature. 3 vols.—Disraeli, Calamities and Quarrels of Authors.—Disraeli, Amenities of Literature.—Disraeli, Literary character of Men of genius.—West Indies. Imperial Department of Agriculture. Bulletin. IV. 3, 4, 5.—Department of Agriculture, Jamaica. Bulletin IV. 2, 7, 10, 11, 12.—Annual reports of the Board of Agriculture, etc. 1906.—Forster, Characteres generum Plantarum, and 29 other volumes.—Shann, Theory of knowledge.—Transactions and Proceedings of the Botanical Society of Edinburgh. XXIII. 2.—Experimental Farms reports. 1905.—West Indian Bulletin. VI. 4.—Bulletin of the Imperial Central Agriculture Experiment Station, Japan. I. 1.—West Indies. Imperial Department of Agriculture. Pamphlet Series, 39, 40.—Botanical Department, Trinidad. Bulletin of Miscellaneous Information. No. 50.—West India and Guiana Farms. pp. 141-145.
- Mr. James H. Bridge.—The inside history of the Carnegie Steel Company. (2 copies.)
- British and Foreign Anti-Slavery Society.—The Anti-Slavery Reporter. Report for 1905-6.
- British Medical Association, Toronto meeting.—Hand-book and Souvenir. 1906.—N.S. Wales branch.—Australasian Medical Gazette for the year 1906-7.
- Mr. James Brand, K.C.S.G.—Administration of the Poor Law in Glasgow.
- British Weights and Measures Association.—Second Annual Report.
- Brooklyn Institute of Arts and Sciences.—Cold spring monographs. VI.—Science bulletin for the year 1906-7.
- Rev. Archibald Brown, Legerwood.—The Sacred Dramas of George Buchanan, translated into English verse.
- John Brownlee, M.D.—Statistical studies in immunity. (2 pamphlets).
- Alexander Bruce, M.D.—Distribution of the cells in the intermedio-lateral tract of the Spinal Cord.
- William Bruce, M.D., LL.D.—Fifteenth annual report of the public health of the county of Ross and Cromarty. 1905.
- Dr. and Mrs. Thomas H. Bryce.—31 volumes and 24 pamphlets from the library of the late Professor Veitch, LL.D.
- Buenos Aires, Direction générale de la Statistique municipale.—Annuaire statistique. 1905.—Monthly Bulletin of municipal statistics. XX. 5.
- Bureau of Education, Washington.—Annual Reports of the Department of the Interior. 1904.
- Bureau of Ethnology. Twenty-third Annual Report. 1901-2.—Bulletin 29.
- Bureau of Standards.—Bulletin. I. 1-3.
- Rev. D. Butler, M.A., Edinburgh.—The Tron Kirk of Edinburgh.
- Calendars, programmes, or reports have been received from the following institutions:—Aachen, Technische Hochschule; Aberdeen University; Adelaide University; Aberystwyth, University College of Wales; Belfast, Queen's College; Birmingham University; Bombay University; Bristol, University College; Bristol, Merchant Venturers' Technical College; Brown University, U.S.A.; Budapest, Royal University; Calcutta University; Canada, Queen's College and University.—School of Mining; Canterbury College, New Zealand; Cape of Good Hope University; Colorado University; Cork, Queen's College; Dalhousie University, Halifax; Durham University; École pratique des hautes Études; Edinburgh University; Edinburgh, School of Medicine of the Royal Colleges; Royal College of Surgeons of England; Exeter Royal Albert Memorial College; Galway, Queen's College; Glasgow and West of Scotland Technical College; Glasgow, St. Mungo's College; Guy's Hospital Medical School; Universidad de la Habana; Halifax, Presbyterian College; Hartford Theological Seminary; Henderson Trust; Heriot-Watt College, Edinburgh; State University, U.S.A.; Illinois University; Royal University of Ireland; Japan, Kyoto Imperial University; Johannesburg, Transvaal.

- University College; Königsberg, Palaestra Albertina; Leeds University; Leland Stanford Junior University; Liverpool University; London, King's College; Royal Holloway College; London, Trinity College of Music; London University; Université catholique de Louvain; Université de Lyon; McGill University, Faculty of Medicine; Manchester University; Melbourne University; Michigan University; Michigan School of Mines; Universidad de Montevideo; Université de Nancy; Nebraska University; Académie de Neuchâtel; Newcastle-upon-Tyne, Armstrong College; New York University; New Zealand University; University of North Wales; North-western University, U.S.A.; Nottingham, University College; Otago University; R. Università degli Studi di Padova; Pennsylvania University; Pharmaceutical Society of Great Britain; Università di Pisa; College of Preetors, London; Quebec, Université Laval; Constantinople, Robert College; St. Andrews University; L'Université Impériale de St. Pétersbourg; University College of South Wales; Sydney, Australian Museum; Sydney University; Toronto, Trinity University; University of Toronto, Faculty of Medicine; Tokyo, Imperial University; Vermont University; Victoria University, Canada; University of Wales; Wesley College, Winnipeg; West of Scotland Agricultural College; Wigan and District Mining and Technical College.
- Caledonian Medical Society.—Caledonian Medical Journal for the year 1906-7.
- Cambridge Philosophical Society.—Proceedings and Transactions for the year 1906-7.
- Cambridge University Press.—Higher Local Examinations. December, 1906.
- Cambridge.—Local Examinations. 1906. Class list (boys). Class list (girls).
- Mr. R. S. Campbell, Rosneath.—Bombay Gazetteer. B. II.-VI., X.-XIII., XV.-XXIV., XXVII.
- John Campbell, M.D.—Clinical Gynaecology. Nos. 1-16.
- Canada, Department of Agriculture, Ottawa.—Experimental Farms. Reports for 1905.—Central Experimental Farm, Ottawa.—Bulletin No. 53: The division of insects and plants; Milling tests of wheat; Advancement of Agriculture in Canada; Fruit culture and Potato growing; Fertilizers, Ensilage, Feeds.
- Carnegie Institution, Washington.—Publications. Nos. 37, 38, 40-42, 44-46, 49-53, 61-65.—Year-book. Nos. 4 and 5. 1905-6.—Index Medicus. 2nd series, III. 4.
- Carnegie Trust for the Universities of Scotland.—Sixth annual report.
- Carnegie Foundation for the Advancement of Teaching.—First annual report. 1906.
- Rev. John S. Carroll, M.A.—Exiles of Eternity; Prisoners of Hope.
- Mr. Thomas G. Carson, Coleraine.—Man's Responsibility.
- E. P. Cathcart, M.D.—Cathcart and Leathes, On the absorption of proteids from the intestine.
- Curators of the Signet Library, Edinburgh.—Catalogue of early printed books in the Library of the Society of Writers to the Signet.
- Ceylon Marine Biological Laboratory.—Reports. I. 2.
- A. K. Chalmers, M.D.—Infant Mortality.
- Chartered Accountants of Scotland.—Official Directory. 1906-7.
- Citizens' Union.—Jones, Social Responsibilities.
- The City Chamberlain, Glasgow.—Municipal and other public accounts.
- Clinical Society, London.—Journal and Proceedings for the year 1906-7.
- Clinical Society, London.—Transactions. XXXIX.
- Clydesdale Horse Society.—The Clydesdale Stud-book. XXVIII.
- Coast and Geodetic Survey, U.S.A.—Annual report. 1906.
- Solomon Solis-Cohen, M.D.—Palliatives for hay fever.—Silver Therapy.
- College of Science, Imperial University of Tokyo.—Journal for the year 1906-7.
- Colorado College.—Semi-annual bulletin of the Colorado College Observatory.
- Columbia University—Columbia University Quarterly for the year 1906-7.
- Columbia University Library, New York.—52 dissertations presented for the degree of Doctor of Philosophy.
- Conseil pour l'exploration de la Mer, Copenhagen.—Rapports et Procès-Verbaux. VI.—Bulletin statistique des Pêches maritimes. I.—Publications de circonstance, 13c, 33-36.—Bulletin des résultats. 1905-6. 1-3.—Bulletin trimestriel. Année 1905-6. No. 4.
- Co-operative Wholesale Societies, Limited.—Annual for 1907.

- Corporation of Glasgow.—Museums and Galleries. Report. 1905.—Catalogue of Exhibition of Chinese art.
- Rev. Professor Cooper, D.D.—4 volumes and 52 pamphlets.
- Council of the National Association of Colliery Managers.—Transactions. 1. 2.
- Mr. John Coutts.—The Divine Wisdom.
- Cracovie Académie des Sciences.—Bulletin international, Math.—Nat. Klasse. 1905. 8-10. 1906. 1-3. Phil.—Hist. Klasse. 1905. 8-10. 1906. 1-3.
- Rev. Robert Craig, D.D., Edinburgh.—Rock plants with Gospel roots.—Regeneration.
- Dr. Theodor Curtius.—Robert Bunsen als Lehrer in Heidelberg.
- Department of Agriculture, India.—Botanical series. 1. 4.
- Department of the Interior, Canada.—7 maps.
- Department of Mines, New Zealand Geological Survey. Bulletin N.S. 1.
- Department of State, Washington.—Moore, Digest of International law.
- Dr. George Dickson.—"Tuberculosis." 1906-7.
- Messrs. Digby, Long & Co., London.—Dante, Divina Commedia. Translated by C. Potter.
- Direction générale de la Statistique de Buenos Aires.—Recensement général de Buenos Aires.
- Directors of the First Church of Christ, Scientist, Glasgow.—Eddy, Science and Health.
- Director-General of Education in India.—Occasional Reports. No. 3. The Educational System in Japan.
- Durham University College of Medicine.—Gazette for the year 1906-7.
- Thomas Divine, M.D., Huddersfield.—8 pamphlets on Infantile Mortality and allied subjects.
- Henry Dyer, D.Sc.—Education and Work.—6th Financial and Economic Annual of Japan. 1906.—The Currency system of Japan.—An outline of banking system in Japan.—Laws and regulations relating to the government monopoly of Japan.—The national debts of Japan.—A brief outline of the financial system of Japan.
- Earthquake Investigation Committee, Tokyo.—Publications in foreign languages. No. 21. App. II. No. 22. B. Art. 1-4.
- Edinburgh Mathematical Society.—Proceedings. XXIV.
- Edinburgh University.—Gwatkin, The Knowledge of God. 2 vols.—Laurie, Synthetica. 2 vols.
- Engineering Standards Committee.—Reports. 1-23, 25, 27, 28, 31, 33, 34.
- A. S. Eve, M.A., Montreal.—On the radioactive matter in the Earth and the Atmosphere.
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- Arthur H. Ward, F.R.C.S.—Clinical Studies in Syphilis.
- Mr. Adair Welcker.—A dream of realms beyond us. 9th edition.
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- Thomas H. Weir, B.D.—The Canons of Athanasius of Alexandria. Riedel and Crum.—The Armenian version of Revelation. Conybeare.
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- Western Theological Seminary, Chicago.—Little, The Hale Memorial Sermon.
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- Mr. Oswin W. Willcox.—The viscous & the granular theory of glacial motion.
- Principal Williams, M.A.—Journal of Education. N.S. Vols. 27, 28.—Alma Mater. Vol. 23.—Scott as a man of Letters.—Two French critics of Burns.—The Andreas and St. Andrew.
- Mr. P. L. Martin Wills.—A captive of the Bulgarian brigands.
- John T. Wilson, M.D.—15th annual report of the Medical Officer, County Council of Lanark.
- Mr. W. D. Woodburn, L.D.S.—Foxe's Book of Martyrs. 1641. 3 vols.
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### DIVINITY HALL LIBRARY.

This Library is set apart for the special use of students in Divinity. It contains an extensive collection of Theological works. It is supported chiefly by an annual grant from the University Court of Seven Shillings for each student attending the Divinity classes.

The Librarian is elected annually by the students attending the Hall.

## HUNTERIAN MUSEUM.

This Museum was founded by the eminent William Hunter, M.D., who was born in 1718, at Cantieswell or at Long Calderwood, in the Parish of East Kilbride, Lanarkshire. (See *William Hunter: Physician, Anatomist, Founder of the Hunterian Museum*, by Professor John Young, M.D.) By his will, dated 1783, he bequeathed to the Principal and Professors of the College, and their successors in office, his valuable collection of books, manuscripts, coins, paintings, anatomical preparations, zoological and mineral specimens, and archaeological relics, and also a sum of £8,000, the greater part of which was spent on the erection of a building for their reception and preservation.

This building, erected in 1804, became the property of the Union Railway Company, as explained at page 32. But accommodation has been provided for the collections in the new buildings at Gilmorehill. The Museum occupies the north side of the eastern quadrangle, and consists mainly of two halls, the upper of which is galleried. With Dr. Hunter's collections there are incorporated the University collection of Roman inscriptions from the Antonine Vallum, and many important donations that have from time to time been received from friends of the University. Conspicuous among such additions are the Eck collection of minerals and precious stones, the minerals and antiquities presented by Miss Brown of Lanfine, and the contents of the Zoological and Ethnological Museum formerly attached to the Andersonian University.

The Museum contains:—(1) Medical Preparations, (2) Zoological Specimens, (3) Mineral Specimens, (4) Books, Manuscripts, Coins, Paintings, and Archaeological Objects.

The following catalogues of portions of the collections have been published:

1. *Stevenson Catalogue of Greek Coins*. 3 vols. By Geo. Macdonald, M.A. With 102 plates. Price £9 9s.
2. *Tituli Hunteriani: Catalogue of Roman Stones*. By James Macdonald, LL.D. Price 10s. 6d.
3. *Bellahouston Catalogue of Anatomical and Pathological Preparations*. By J. H. Teacher, M.B., C.M. 2 vols. 8vo. Price to students, 2s.

The late James Stevenson, Esq., of Hailie, defrayed the cost of the Catalogue of Greek Coins, and the Bellahouston Trustees that of the Anatomical Catalogue. The Catalogue of the Printed Books is completed in Manuscript. A complete Catalogue of the MSS. is being prepared for publication.

The whole Museum is under the immediate superintendence of the Museums Committee, consisting of two members of the University or others, not being members of Senate, appointed by the University Court, and of four members of Senate, appointed by the Senate. All reports by this Committee are, in the first instance, received by the Senate, and the Senate has power, subject to the review of the University Court, to confirm, modify, or reject the recommendations in such reports.

The Museum is now open to the public, free of charge, on Monday, Wednesday, and Friday, from 10 A.M. to 4 P.M. in winter, 10 A.M. to 5 P.M. in summer. A charge of three-pence for each person is made for admission on Tuesday, Thursday, and Saturday.

#### *Donations to Museum.*

The following donors have contributed to the collections during the past year :—

##### ZOOLOGICAL COLLECTIONS.

- Mr. Peter Macnair.—Cast of pectoral fin of *Cladodus milsoni*.  
 Mr. James Young.—Two fossil fishes (carboniferous).  
 Miss Muriel Robertson.—A Teleostean fish (*Periophthalmus*) from Java.  
 Miss Armour.—*Phyllium* sp. from New Zealand.  
 Miss Florence E. Sexton.—*Limnodynastes maculata* from Lake Tanganyika.  
 Mr. A. M. Thiem.—Head of *Chelone mydas*.  
 Mr. J. F. Savy.—Eggs and specimens of *Hypocypsis* from Seychelles Islands.  
 Dr. N. Livanow.—*Acanthobdella*.  
 Dr. S. F. Harmer, F.R.S.—*Pantodon* from Assaye, S. Nigeria; foetal *Pristis* and *Zygocna* from Dutch Bay, Ceylon; *Xenobalanus* and *Echinorhynchus* from Shetland.  
 Dr. Arthur Willey, F.R.S.—Specimens of *Nautilus*, *Onchidium*, and *Scyllaea* from New Britain; a pectinibranch and a boring gasteropod from Tatili Bay; *Chiton* sp. and *Cryptopora* from the Loyalty Islands; *Kraussium* from Mossman's Bay, Port Jackson; *Ptychodera*, *Asymmetron*, and *Amphisila* from Lifu; and a *Loris gracilis* from Ceylon.  
 G. Hamilton, Esq.—A collection of eggs of British birds.  
 Dr. W. G. Ridewood.—*Cephalodiscus*.  
 Mr. R. A. Staig.—Insects illustrating resemblance, warning colours, and mimicry.  
 Mrs. John Mackay.—Stuffed specimen of *Myopotamus capensis*.

#### *BOTANIC GARDEN.*

A piece of ground adjoining the old College was for many years set apart as a Botanic Garden, for the use of the Lecturer

on Botany; but the great increase of manufactories and other buildings in its vicinity having rendered it unfit for such a purpose, the University, in 1817, agreed to subscribe £2000 towards the formation of a new Botanic Garden then projected by the citizens of Glasgow, on condition that a Lecture-Room should be erected within it for the exclusive use of the Professor of Botany and his pupils—that every facility should be given them in prosecuting the study of Botany—and that three Directors of the Institution should be annually appointed by the Faculty of the College, to represent and protect the interests of the University. The Garden to which this agreement referred was completed and opened to the public in 1819. A Lecture-Room, in which the Professor of Botany delivered an annual course of Lectures during the summer months, was built; and the collection of plants, from the zeal and ability of the Superintendent, and the favourable situation of Glasgow, had become one of the richest and most valuable in the island. The extension of the town again compelled the removal of the Garden to its present site in Hillhead, at a greater distance from the old College, so that the Professor, while he continued to give in it the practical portions of the course (*Demonstrations*), found it more convenient to deliver his Lectures at the University. The removal of the University to Gilmorehill brought it nearer the Botanic Garden, but the Lecture-Room in the Garden being inadequate for the students attending the course of Elementary Lectures on Botany, and there being no Laboratory, Museum, or Herbarium-Room in the Garden, the Professor has continued to deliver his Lectures and to have his Laboratory at the University. Suitable buildings for the Botanical department have now been erected within the University grounds, and include Lecture Room, Museum, Herbarium, Laboratories, and other rooms.

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#### MARINE BIOLOGICAL ASSOCIATION OF THE WEST OF SCOTLAND.

The station of the Association is situated near Keppel Pier, in the island of Cumbrae, and was opened in May, 1897. A constitution was adopted at a meeting of the Association held on 15th January, 1901. The chief object which the

promoters have in view is to afford opportunities for the investigation of the Marine Fauna and Flora of the district known as the Clyde Sea Area, or of other parts of the West Coast of Scotland. A practical laboratory has been provided and equipped, and one of the tables in it, for which the University Court subscribes, is called the University Table. The nomination of students to the privilege of working at this table is made by the Senate on the report of the Professors of Zoology and Botany. Applications should be addressed to the Clerk of Senate.

## *IX.—GRADUATION IN THE SEVERAL FACULTIES.*

### *EXAMINERS.*

#### **Preliminary Examinations in Arts, Science, and Medicine.**

The University Court of each University annually appoints as Examiners such number of Professors or Lecturers in the Faculty of Arts in that University, and such additional Examiners as may be deemed necessary. The Preliminary Examinations in Arts, Science, and Medicine are conducted by these Examiners, under the control and supervision of a Joint-Board appointed in January of each year by the several University Courts from among the Examiners, according to a scheme of rotation prescribed in Ordinance No. 13, Section IV., as supplemented by Ordinance No. 43, Section I.

The Joint-Board holds office from the first day of February to the thirty-first day of January in the succeeding year, and sits at each University in rotation in the following order:—Edinburgh (1905-6), Glasgow (1906-7), Aberdeen (1907-8), St. Andrews (1908-9). It consists of eight Professors or Lecturers and eight additional Examiners, two Professors or Lecturers and two additional Examiners being appointed by the University Court of each University, according to the scheme printed on p. 211. In the case of a candidate at a Preliminary Examination who is permitted to offer himself for examination in any language not included in the Preliminary Examination, each University makes special arrangements for the examination of its own candidates.



UNIVERSITY.	1893 and every Fourth Year thereafter (1905).	1894, and every Fourth Year thereafter (1906).	1895, and every Fourth Year thereafter (1907).	1896, and every Fourth Year thereafter (1908).
ST. ANDREWS,	English (Professor). Classics (Additional Examiner). Mathematics and Dynamics (Additional Examiner). Modern Languages (Professor or Lecturer).	English (Professor). Classics (Professor). Mathematics and Dynamics (Additional Examiner). Modern Languages (Additional Examiner).	English (Additional Examiner). Classics (Professor). Mathematics and Dynamics (Professor). Modern Languages (Additional Examiner).	English (Additional Examiner). Classics (Additional Examiner). Mathematics and Dynamics (Professor). Modern Languages (Professor or Lecturer).
GLASGOW,	English (Additional Examiner). Classics (Additional Examiner). Mathematics and Dynamics (Professor). Modern Languages (Professor or Lecturer).	English (Professor). Classics (Additional Examiner). Mathematics and Dynamics (Additional Examiner). Modern Languages (Professor or Lecturer).	English (Professor). Classics (Professor). Mathematics and Dynamics (Additional Examiner). Modern Languages (Additional Examiner).	English (Additional Examiner). Classics (Professor). Mathematics and Dynamics (Professor). Modern Languages (Additional Examiner).
AMSTERDAM,	English (Additional Examiner). Classics (Professor). Mathematics and Dynamics (Professor). Modern Languages (Additional Examiner).	English (Additional Examiner). Classics (Additional Examiner). Mathematics and Dynamics (Professor). Modern Languages (Professor or Lecturer).	English (Professor). Classics (Additional Examiner). Mathematics and Dynamics (Additional Examiner). Modern Languages (Professor or Lecturer).	English (Professor). Classics (Professor). Mathematics and Dynamics (Additional Examiner). Modern Languages (Additional Examiner).
EDINBURGH,	English (Professor). Classics (Professor). Mathematics and Dynamics (Additional Examiner). Modern Languages (Additional Examiner).	English (Additional Examiner). Classics (Professor). Mathematics and Dynamics (Professor). Modern Languages (Additional Examiner).	English (Additional Examiner). Classics (Additional Examiner). Mathematics and Dynamics (Professor). Modern Languages (Professor or Lecturer).	English (Professor). Classics (Additional Examiner). Mathematics and Dynamics (Additional Examiner). Modern Languages (Professor or Lecturer).

### Degrees in Arts.

The Examiners for Degrees in Arts are the Professors whose subjects qualify for Graduation in Arts, together with such Lecturers in the University and such additional Examiners appointed by the University Court as the University Court may deem necessary.

### Degrees in Science.

The Examiners for Degrees in Science are the Professors whose subjects qualify for Graduation in Science, together with such Lecturers in the University and such additional Examiners appointed by the University Court as the University Court may deem necessary.

### Degrees in Medicine.

The Examiners for Graduation in Medicine are the Professors whose subjects qualify for Graduation in Medicine, together with such Lecturers in the University and such additional Examiners appointed by the University Court as the University Court may deem necessary, such provision being made as will ensure that every candidate shall be examined in each subject by at least two Examiners, one of whom shall not be a Professor or Lecturer in the University.

No person is eligible for appointment to the office of additional Examiner, whether for Preliminary Examination or for Degrees in Arts, Science, or Medicine, who is a Professor, Lecturer, or University Assistant or Demonstrator in any Scottish University, and the appointment of any additional Examiner during the currency of his term of office to a Professorship, Lectureship, or to the office of University Assistant or Demonstrator in any Scottish University is held to vacate his office of Examiner. The periods of appointment of additional Examiners are so adjusted as to secure that all the Examiners shall not vacate their office at the same time; but no Examiner can be appointed for a longer period than four years, and no person who has held the office of Examiner for a period of three or four years is eligible for reappointment to the office of Examiner in the same University until he has ceased to hold the office of Examiner in such University for not less than one year.

In the event of a vacancy in the office of a member of the Joint-Board, or of an Examiner or additional Examiner in Arts, Science, or Medicine, occurring otherwise than by expiration of his term of office, the person appointed in his room is appointed for the remainder of such term only.

### Degrees in Law.

The Examiners for the Degree of Bachelor of Laws are the Professors of or Lecturers on the subjects included in the examinations for the said degree, and additional Examiners appointed by the University Court.

The Examiners for the Degree of Bachelor of Law are the Professors of or Lecturers on the subjects included in the examinations

for the said degree, and additional examiners appointed by the University Court.

#### Degrees in Divinity.

The Examiners for the Degree of Bachelor of Divinity are the Professors of or Lecturers on the subjects included in the examinations, and two additional Examiners appointed by the University Court.

### REGULATIONS FOR GRANTING DEGREES.

#### 1. GRADUATION IN ARTS.

REGULATIONS APPLICABLE TO ALL WHO HAVE ENTERED ON THEIR ACADEMICAL COURSE SINCE 1ST OCTOBER, 1892.

The conditions on which the Degree of Master of Arts is now conferred are regulated by Ordinances No. 11,<sup>1</sup> No. 44, No. 148, No. 160, and No. 168 of the Universities Commission (1889), the principal provisions of which are the following :—

I. The Academical year in each University shall commence on the first day of October. The classes shall meet for the winter session (which shall include not less than twenty teaching weeks) on such day thereafter as the Senatus of each University shall determine; and shall close not later than the tenth day of the following April.

The University Court of each University shall institute a summer session in such of the subjects or branches of subjects qualifying for graduation in Arts as may be determined by the said Court after consultation with the Senatus. Such session shall commence on such day as the Senatus of each University shall determine, and shall include ten teaching weeks at least. The classes shall be conducted by the Professors, or by Lecturers appointed under Ordinance No. 17 (Regulations as to Assistants and Lecturers).

II. The Curriculum for the Degree of Master of Arts (M.A.) shall extend over not less than three winter sessions, or two winter sessions and three summer sessions.

#### PRELIMINARY EXAMINATION.<sup>2</sup>

III. (1) Before entering on the Curriculum (subject to the proviso contained in Section IV., Sub-section 1) each student shall pass a Preliminary Examination in the following subjects :—

1. English.
2. Latin or Greek.<sup>3</sup>
3. Mathematics.

<sup>1</sup> This ordinance was printed in full in the *University Calendar* for 1892-93, pp. 477-485, and the modifications made by Ordinance No. 44 were inserted in italics in the *University Calendar* for 1894-95.

<sup>2</sup> Supplementary Regulations issued by the Joint Board on 31st January, 1907, have been inserted in smaller type at the points in the ordinances to which they relate.

<sup>3</sup> See Section XXI. on page 226.

4. One of the following :—Latin or Greek (if not already taken), French, German, Italian (or such other language as the *Senatus Academicus* may approve), Dynamics.

Under this sub-section the Senate has approved of (1) Japanese, (2) Spanish. Any candidate who proposes to be examined in Japanese or Spanish or in any other language than the six mentioned in the Ordinance is required to make intimation to the Senate before 1st Feb. or 1st July for the Spring and Autumn Examinations respectively.

(2) The examination must be passed in the matters and on the standards hereinafter defined; but there shall be a higher and a lower standard in Latin and in Greek, and a higher, an intermediate, and a lower standard in Mathematics.

Candidates must pass on the higher standard in at least one of these three subjects, and may pass on the lower standard in either or both of the remaining two; subject always to the conditions relative to attendance contained in Section IV. hereof.

(3) English shall include Grammar and Composition, and the outlines of Geography and British History, and the standard shall not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

In the case of a foreign student, whose native language is other than English, the standard required in English in the Preliminary Examination shall be such as the Joint-Board of Examiners may deem sufficient.

The Joint-Board has issued the following directions showing the character of the papers to be set in English :—

English will include (a) Grammar, (b) Composition, (c) Literature, (d) History, and (e) Geography.

(a) Grammar will include Analysis, Parsing, Derivation, and Correction of Sentences.

(b) Composition will include an Essay and Paraphrasing.

(c) Literature will comprise a knowledge of certain prescribed books of two or three writers. Questions requiring a general knowledge of the life and works of the greater writers will not be set; but one or two questions may be set, giving an opportunity to candidates who have read widely in English Literature to show their knowledge. The prescribed books will be :—For 1907, Shakespeare, *A Midsummer Night's Dream*; Miss Austen, *Emma*; *Golden Treasury* (1st series) Books II. and IV.; Carlyle, *Heroes and Hero Worship*. For 1908, Shakespeare, *Macbeth*; Scott, *Quentin Durward*; *Golden Treasury* (1st series), Books II. and III.; Macaulay, *Essay on Addison*.

(d) History will include a knowledge of one of the three following periods, questions in each of which will be set in each examination, viz.: The outlines of the History of both England and Scotland (a) from the Roman Occupation to 1603; (b) from 1603 to the Union of the Parliaments in 1707; (c) from the Union of the Parliaments to the Reform Bill of 1832.

(e) Geography will include a general knowledge of the Geography of the World, and a special knowledge of the Geography of the British Empire.

(4) Latin and Greek shall comprise grammatical questions, translation into English from Latin or Greek authors not previously prescribed, and translation of plain passages or easy sentences from English into Latin or Greek. The higher standard shall not be lower than that presently [before October, 1892] adopted in the examination for a Curriculum of three sessions, or for the Higher Grade Leaving Certificate of the Scotch Education Department, and the lower standard shall not be lower than

that presently adopted for the Lower Grade Leaving Certificate of the said Department.

The Latin examination on the higher standard will include Translation, Prose Composition, Grammar, and Sentences.

The Greek examination on the higher standard will include Translation, Sentences (or an easy passage of continuous English Prose, set either as an alternative or as a substitute), and Grammar.

The passages for translation both from Greek and Latin will include Prose and Verse.

The Latin examination on the lower standard will include Translation and Parsing, Prose Composition, Grammar, and Sentences.

The Greek examination on the lower standard will include Translation, Sentences, and Grammar.

In the Latin and the Greek papers both on the higher and lower standards, candidates are required to satisfy the Examiners both in Composition and in Translation.

Candidates who, having taken in Latin or Greek the examination on the higher standard, have failed to pass on that standard, but have obtained a percentage of marks equivalent to a pass on the lower standard, may be held by the Board to have passed the examination on the lower standard. But those to whom it is important to obtain a lower pass in the event of failure for the higher, are advised to take the lower paper.

(5) French, German, and Italian shall comprise grammatical, literary, and easy philological questions, translation into English from French, German, or Italian authors not previously prescribed, and translation from English into French, German, or Italian; and the standard shall not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

In the examinations to be held in 1907 :—

Two papers will be set in French and two in German, two hours being allowed for each; the first paper to contain a passage for translation from English into French or German, and a test in free composition on some easy subject; the second paper will contain a few grammatical and easy philological questions, two unseen pieces for translation into English (one in prose, one in verse), and a selection of literary questions from which the candidate must choose one only. Candidates will be expected to satisfy the Examiners on the first paper in the language which he takes.

Literature will comprise a general knowledge of the life and works of four standard writers (for French literature, two at least from the 19th century, and one at least from the 17th century), with special reference to one particular work by each of them. Two of the authors will be changed from year to year.

The authors prescribed for literary questions (in 1907) will be as follows :—

FRENCH.—*La Fontaine, Fables*, Book VII.; *Molière, Le Bourgeois Gentilhomme*; Victor Hugo, *Hernani*; Taine, *Voyage aux Pyrénées*.

GERMAN.—*Lessing, Minna von Barnhelm*; Schiller, *Ballads*; Goethe, *Extracts from Dichtung und Wahrheit* (School Text); Freytag, *Soll und Haben* (School Text).

And in 1908 :—

FRENCH.—*Molière, Le Bourgeois Gentilhomme*; Victor Hugo, *Hernani*; Jules Sandeau, *Mlle de la Seiglière* (the play); Daudet, *Lettres de mon moulin*.

GERMAN.—*Lessing, Minna von Barnhelm*; Freytag, *Die Journalisten*; Eichendorf, *Aus dem Leben eines Taugenichts*; Wildenbruch, *Das alte Blut*.

(6) Mathematics on the lower standard shall comprise—(a) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest; (b) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations; (c) Geometry: Euclid, Books I., II., and III. (or their equivalents), with easy deductions. Demonstrations other than Euclid's

will be accepted if they assume no propositions which in Euclid's order are subsequent to the proposition under consideration.

(7) Mathematics on the intermediate standard shall include the following, in addition to the subjects included in the lower standard, viz.:—(a) Euclid: Book VI., Propositions 1—19, or Geometry equivalent thereto. (b) Algebra: Quadratic Equations, Ratio and Proportion. (c) The Trigonometry of Right-angled Triangles.

No candidate can pass on the intermediate standard who either does not, at the same time, pass on the lower standard, or has not previously passed on the lower standard.

(8) Mathematics on the higher standard shall, in addition to what is included on the lower standard, comprise Euclid, Books IV., VI., and the first twenty-one propositions of Book XI. (or their equivalents), with Deductions, Quadratic Equations, Trigonometry to the Solution of Triangles inclusive, and the use of Logarithmic Tables.

In the examination in Mathematics on the higher and intermediate and on the lower standards each question in Geometry will consist of two parts, of which one will be an easy deduction or illustrative exercise on the proposition set as bookwork.

There will be two papers in Mathematics on the higher and on the intermediate standard. The first paper will consist of questions on Geometry, and on Trigonometry, in the proportion of four-fifths Geometry and one-fifth Trigonometry. The second paper will consist of questions on Algebra (including Arithmetic), and on Trigonometry, in the proportion of four-fifths Algebra and one-fifth Trigonometry, and shall contain two or more questions on Arithmetic, of which one at least shall be taken by all candidates.

Candidates for the higher standard may obtain full marks by doing correctly about two-thirds of the questions set in each subject; but the Examiners will be entitled to reject a candidate who makes in any subject less than a certain minimum of the marks allotted to that subject.

The pass-mark for candidates on the intermediate standard is fixed with reference to the total number of marks assigned to questions which fall under the syllabus of the intermediate standard; but such candidates will receive credit for any question they may answer.

The paper in Mathematics on the lower standard will be devoted to the various subjects comprised in as nearly as possible the following proportions: four-ninths to Geometry, three-ninths to Algebra, and two-ninths to Arithmetic.

Candidates may obtain full marks by doing correctly about two-thirds of the questions set in each subject; but the Examiners will be entitled to reject a candidate who makes in any subject less than a certain minimum of the marks allotted to that subject.

(9) Dynamics shall mean the Elementary Statics and Kinetics of Solids, Liquids, and Gases.

The paper on Dynamics will be directed to test the candidate's knowledge of the fundamental principles of the subjects included in it. Questions may be set which involve the Trigonometry of right-angled triangles.

Candidates may obtain full marks by doing correctly about two-thirds of the questions set in each section of the paper.

(10) A candidate shall be obliged to pass in all the required subjects at one or not more than two examinations; provided that he may *offer himself for re-examination* as often as may be necessary *to satisfy this condition*.<sup>1</sup>

IV. (1) Attendance on any class shall not qualify for graduation, unless the whole Preliminary Examination has been previously passed. *Any*

<sup>1</sup> The words in italics are taken from a supplementary Ordinance No. 44, which was approved by Her Majesty in Council on 28th May, 1894, and came into force on 1st October, 1894. The ordinance provides that the alterations on Sections III. (10) and IV. (1) shall be held to have come into force on 1st October, 1892.

*student who has passed in Latin, Greek, or Mathematics on the higher standard may attend a qualifying class in such subject or subjects without having passed in the other subjects of the examination, provided always that (a) no candidate shall be allowed to present himself for examination in any subject qualifying for graduation until he has passed the whole Preliminary Examination; and (b) no student shall be admitted to a degree in Arts unless he has attended qualifying classes in the University granting the degree, or in another Scottish University, as provided by Section xxv. hereof, for three academic years after he has completed his Preliminary Examination.*<sup>1</sup>

(2) Attendance on a class in any language included in the Preliminary Examination shall not qualify for graduation, unless the candidate, before entering the class, has passed the Preliminary Examination in that subject, and on the higher standard where a double standard is provided. He may, for that purpose, attend any Preliminary Examination held during the course of his study, taking only the paper set in that subject; provided always that the provisions of the sub-section immediately preceding shall have been satisfied.

(3) Attendance on a class in any language not included in the Preliminary Examination shall not qualify for graduation, unless the candidate has previously passed an examination in that language on a standard as nearly as possible equivalent to the higher standard of the languages included in the Preliminary Examination.

(4) Attendance on a class of Mathematics or Natural Philosophy shall not qualify for graduation unless the candidate, before entering the class, has passed in Mathematics on the higher standard or on the intermediate standard.

V. (1) The Preliminary Examination shall be held at each University twice in each year, under such regulations as the Senatus, with the approval of the University Court, shall from time to time determine, and shall be conducted in writing.<sup>2</sup>

(2) The Joint-Board of Examiners to be appointed under the provisions of Ordinance No. 13 (Regulations as to Examinations) shall have power to accept a Pass in the Higher Grade of the Leaving Certificate Examination of the Scotch Education Department in any subject as an equivalent for the Preliminary Examination in that subject; to accept a Pass in the Leaving Certificate in Science as an equivalent for the Preliminary Examination in the subject of Dynamics; and to accept a Pass in the Lower Grade as an equivalent for the Preliminary Examination on the lower standard in Latin, Greek, and Mathematics; provided they are satisfied that the standard of the examination, at which the said passes were obtained, is not lower than that required by this ordinance.

Under this sub-section the Joint Board of Examiners has resolved as follows:—For the Preliminary Examination in Arts and Science, Passes in the Higher and Honours Grade of the Leaving Certificate Examinations of the Scotch Education Department in Latin, Greek, and Mathematics will be accepted as equivalent to the higher standard in each of these subjects, as prescribed by the Arts Ordinance, and Passes

<sup>1</sup> See footnote on p. 216.

<sup>2</sup> For dates of Preliminary Examinations see Table on page 218.

# TABLE OF PRELIMINARY EXAMINATIONS FOR DEGREES IN ARTS, SCIENCE AND MEDICINE, TO BE HELD DURING SESSION 1907-8.

## I. ARTS AND SCIENCE.

Fee.	Names to be given in and Fees paid to Assistant-Clerk (Matriculation Office). Date.	Subject.	Dates of Examinations and Hours at which the various Papers will be set.	
		English (1st Paper), Higher Latin (1st Paper), - Lower Latin, - English (2nd Paper), Intermediate and Higher Math. (1st Paper), - Lower Greek, - Higher Latin (2nd Paper), - Intermediate and Higher Math. (2nd Paper), - Lower Mathematics Higher Greek (1st Paper), - French (1st Paper), Dynamics, - Higher Greek (2nd Paper), - French (2nd Paper), German (1st Paper), German (2nd Paper), Italian (1st Paper), Italian (2nd Paper), Celtic,	Friday, 27th September, 9 to 11 a.m. Friday, 27th September, 12 noon to 2 p.m. Friday, 27th September, 3 to 6 p.m. Saturday, 28th September, 9 to 11 a.m. Saturday, 28th September, 12 noon to 2 p.m. Saturday, 28th September, 3 to 6 p.m. Monday, 30th September, 9 to 11 a.m. Monday, 30th September, 12 noon to 2 p.m. Monday, 30th September, 3 to 6 p.m. Tuesday, 1st October, 9 to 11 a.m. Tuesday, 1st October, 12 noon to 2 p.m. Tuesday, 1st October, 3 to 6 p.m. Wednesday, 2nd October, 9 to 11 a.m. Wednesday, 2nd October, 12 noon to 2 p.m. Wednesday, 2nd October, 3 to 5 p.m. Thursday, 3rd October, 9 to 11 a.m. Thursday, 3rd October, 12 noon to 2 p.m. Thursday, 3rd October, 3 to 5 p.m. Saturday, 5th Oct., 9 to 11 a.m. & 4 to 6 p.m.	Friday, 27th March, 9 to 11 a.m. Friday, 27th March, 12 noon to 2 p.m. Friday, 27th March, 3 to 6 p.m. Saturday, 28th March, 9 to 11 a.m. Saturday, 28th March, 12 noon to 2 p.m. Saturday, 28th March, 3 to 6 p.m. Monday, 30th March, 9 to 11 a.m. Monday, 30th March, 12 noon to 2 p.m. Monday, 30th March, 3 to 6 p.m. Tuesday, 31st March, 9 to 11 a.m. Tuesday, 31st March, 12 noon to 2 p.m. Tuesday, 31st March, 3 to 6 p.m. Wednesday, 1st April, 9 to 11 a.m. Wednesday, 1st April, 12 noon to 2 p.m. Wednesday, 1st April, 3 to 5 p.m. Thursday, 2nd April, 9 to 11 a.m. Thursday, 2nd April, 12 noon to 2 p.m. Thursday, 2nd April, 3 to 5 p.m. Friday, 3rd April, 9 to 11 a.m. & 3 to 5 p.m.
10s. 6d.	9th September or 6th March.			
10s. 6d.				

## II. MEDICINE.

10s. 6d.	9th September or 6th March.	English, - Latin, - Greek, - Mathematics, - French, - German, -	Friday, 27th September, 9 a.m. to 12 noon. Friday, 27th September, 3 to 6 p.m. Saturday, 28th September, 3 to 6 p.m. Monday, 30th September, 3 to 6 p.m. Tuesday, 1st October, 12 noon to 3 p.m. Wednesday, 2nd October, 3 to 6 p.m.
10s. 6d.			



in the Lower Grade Certificate Examinations to the lower standard; Passes in the Higher and Honours Grade in English, in Modern Languages, and in Dynamics, will be accepted as equivalent to the standard prescribed for each of these subjects by the Arts Ordinance; a Pass in the Leaving Certificate in Science will be accepted as equivalent to the examination in the subject of Dynamics. The Regulation that all the subjects of the examination shall be passed at one or not more than two examinations shall not be held to apply to the Leaving Certificate Examinations.

(3) The Joint-Board of Examiners shall have power to determine what examinations, if any, other than those for the Leaving Certificates of the Scotch Education Department, may be accepted as equivalent to the Preliminary Examination in whole or in part, provided they are satisfied that such other examinations are in fact equivalent thereto.<sup>1</sup>

Under this sub-section the Joint-Board have agreed to accept the following Examinations as exempting from the Preliminary Examination in Arts and Science, either wholly or in part:—

(a) A Degree in Arts or in Science, not being an Honorary Degree, in any of the Universities of the United Kingdom, shall exempt from the Preliminary Examination in Arts or in Science, as the case may be.

(b) A Certificate of having passed in the Honours or First Division in English in the London University Matriculation Examination will be accepted as equivalent to English in the Arts and Science Preliminary Examination; and the Joint-Board also accepts, for the Preliminary Arts and Science Examination, (1) London University Matriculation Mathematics, as equivalent to Lower Mathematics; (2) London University Matriculation Mechanics as equivalent to Dynamics; and (3) London University Intermediate Mathematics as equivalent to Intermediate and Higher Mathematics.

(c) Oxford and Cambridge Schools Examination Board. Exemption will be granted as follows:—

A Pass in *Latin or Greek* for the Lower Certificate or the 'Leaving Certificate' will be accepted for Lower Latin or Lower Greek.

A Pass in *Latin or Greek* for the Higher Certificate will be accepted for Higher Latin or Higher Greek.

A Pass in *French or German* for the Higher Certificate will be accepted for the Arts and Science Pass in these subjects respectively.

In *Mathematics*,

Elementary Mathematics of the 'Leaving Certificate.'	} Will be accepted for Lower Mathematics.
Elementary Mathematics of the Higher Certificate.	
Additional Mathematics for the 'Leaving Certificate,' if endorsed with Trigonometry.	} Will be accepted for Higher Mathematics.
Additional Mathematics for the Higher Certificate.	

<sup>1</sup> Applications for exemption on the ground of having passed examinations not included in the following list should be addressed to the Convener of the Board. As several Universities have to be consulted, a decision on a new case cannot be guaranteed in less time than from two to three weeks.

Of these two, the former if not endorsed with Trigonometry will be accepted for Lower Mathematics only.

Natural Philosophy (Mechanical Division) will be accepted for Dynamics.

In *English*,

The Higher Certificate with English.

The Higher Certificate with Essay and History } Will be accepted for  
or Geography. } the Arts and Science

The 'Leaving Certificate,' with English, History, } Pass in English.  
and Geography (the combined subject).

(d) Oxford University Local Examinations:—

(i.) Junior Local Examination:—Distinction in Mathematics (if the Candidate has passed both in Algebra and Geometry), with a Pass in Arithmetic, will exempt from Lower Mathematics.

A Pass in Higher Mathematics, if it includes Algebra and Geometry with a Pass in Arithmetic, will exempt from Lower Mathematics.

(ii.) Senior Local Examination:—A Pass in Latin will exempt from Lower Latin; a Pass in Greek will exempt from Lower Greek; Distinction in Latin will exempt from Higher Latin; Distinction in Greek will exempt from Higher Greek; Distinction in French or German will exempt from French or German respectively; a Pass in Mathematics, including Algebra and Geometry, with Arithmetic, will exempt from Lower Mathematics; a Pass in Higher Mathematics, including Algebra, Geometry, and Trigonometry, will exempt from Higher Mathematics; a Pass in English Language and Literature, History, and Geography (with Distinction in the first of the three) will exempt from English.

(iii.) Higher Local Examination:—This will be accepted *pro tanto*.

(e) Cambridge University Local Examinations:—

(i.) Junior Local Examination:—Distinction in Mathematics will exempt from Lower Mathematics, provided it includes a Pass in both Algebra and Geometry.

(ii.) Senior Local Examination:—A Pass in Latin will exempt from Lower Latin; a Pass in Greek will exempt from Lower Greek; Distinction in Latin will exempt from Higher Latin; Distinction in Greek will exempt from Higher Greek; Distinction in French or German will exempt from French or German respectively; a Pass in Algebra and Geometry will exempt from Lower Mathematics; a Pass in Mathematics, including a Pass in Algebra, Geometry, and Trigonometry, will exempt from Higher Mathematics; a Pass in English Language and Literature, History and Geography (with Distinction in the first of the three) will exempt from English.

(iii.) Higher Local Examination:—This will be accepted *pro tanto*.

(f) Universities of India (Calcutta, Madras, Bombay, Punjab, Allahabad):—

A Pass in the 'Intermediate' or 'First Arts' Examination will exempt from the Lower Standard in Latin, Greek, or Mathematics. Exemption on the Higher Standard will be granted in any subject in which the

applicant can show by special certificate that he has obtained not less than 45 per cent. in the paper on that subject in the Intermediate Examination. Applicants who have obtained a 'First Class' or have been placed in the 'First Division' in that examination will receive full exemption from the Preliminary in Arts or Science (provided that the subjects taken include those required by the Ordinances of the Scottish Universities Commissioners, and subject to the provisions of Ord. No. 11. Section IV. subsections 2, 3, and 4 (p. 217).

(g) Continental Countries.—Abiturienten-Examen giving admission to German Universities, and corresponding Examinations in other Countries.

By *pro tanto* is here meant that a certificate of having passed in the Examination referred to, in any subject required for the Arts and Science Preliminary Examinations, shall, as regards that subject, exempt from further examination in the said Preliminary Examination, provided that all the required subjects shall be passed at one or not more than two examinations.

#### ORDINARY DEGREE.

VI. Candidates for the ordinary degree of Master of Arts may follow the Curriculum and take their degree in the subjects hitherto recognized for graduation, as provided by the regulations<sup>1</sup> contained in Ordinances Nos. 12, 14, 18, and 69 of the Commissioners under the Universities (Scotland) Act, 1858, subject always to the preceding provisions of this ordinance; or they may vary the Curriculum for graduation under the regulations contained in the immediately succeeding sections.

VII. (1) Candidates shall attend full courses in at least seven subjects, and shall be examined on these subjects.

(2) Of these subjects four must be (a) Latin or Greek (not Modern Greek); (b) English or a Modern Language (*i.e.* French, German, Italian, or Spanish) or History; (c) Logic and Metaphysics, or Moral Philosophy; (d) Mathematics or Natural Philosophy.

(3) The remaining subjects may be selected by the candidate from the departments specified in Section IX. of this ordinance, under the following condition:—That the whole subjects taken shall include either (a) both Latin and Greek (not Modern Greek), or (b) both Logic and Moral Philosophy, or (c) any two of the following three subjects:—Mathematics, Natural Philosophy, and Chemistry.

VIII. (1) Each of the subjects must be studied in a full course of not less than one hundred meetings of the class on separate days, except in cases where the Senatus, with the approval of the University Court, shall have sanctioned, as qualifying for graduation, half courses of not less than fifty meetings on separate days; or where the Senatus, with the approval of the said Court, shall, having regard to the nature of the subject, sanction full courses of less than one hundred or of less than fifty meetings respectively.

Under this sub-section the Senate, with the approval of the University Court, has sanctioned, as qualifying for graduation, half courses in the

<sup>1</sup> These regulations are printed on pp. 173, 174 of the *Calendar* for 1900-1901.

following subjects, viz.:—Latin, Greek, Hebrew, Arabic, Mathematics, and Astronomy.

(2) Two half courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

Under this sub-section the Senate, with the approval of the University Court, has determined that a half course in any subject may not be combined with a half course in another subject, but only with a second half course in the same subject.

(3) Where a subject is taught in a practical class, as well as in a systematic class, the Senatus, with the approval of the University Court, shall regulate the course of study and determine the relative proportion of lectures and laboratory or practical work.

Under this sub-section the Senate, with the approval of the University Court, has resolved that in Chemistry, Zoology, Botany, and Geology, the course of study for a Degree in Arts, and the relative proportion of lectures and laboratory or practical work, shall be as follows:—

1. Chemistry.—A systematic course of one hundred meetings of the class and a practical course of two and a half months.

2. Zoology.—One hundred meetings on separate days, viz., fifty in systematic course and fifty in practical course.

3. Botany.—One hundred meetings on separate days, viz., fifty in systematic course and fifty in practical course.

4. Geology.—One hundred meetings on separate days.

IX. The departments of study for graduation in Arts in each University shall, if adequate instruction is provided, include the following subjects, with such additions or modifications in any University as may hereafter be made by ordinance of the University Court:—

#### 1. *Language and Literature.*

Latin.	French.	Sanskrit.	Celtic.
Greek.	German.	Hebrew.	Modern Greek.
English.	Italian.	Arabic or Syriac.	

#### 2. *Mental Philosophy.*

Logic and Metaphysics.	Education (Theory, History, and
Moral Philosophy.	Art of).
Political Economy.	Philosophy of Law.

#### 3. *Science.*

Mathematics.	Astronomy.	Zoology.	Geology.
Natural Philosophy.	Chemistry.	Botany.	

#### 4. *History and Law.*

History.	Roman Law.
Archæology and Art (History of).	Public Law.
Constitutional Law and History.	

X. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, shall be entitled to receive the ordinary degree of Master of Arts on payment of the fees required.

## DEGREE WITH HONOURS.

XI. (1) The degree of Master of Arts may be taken with Honours in any of the following Groups, in which Honours Classes shall have been established in at least two subjects:—

- (a) Classics (*i.e.* Latin and Greek, with optional subjects such as Comparative Philology, Ancient Philosophy, and Classical Archaeology).
- (b) Mental Philosophy.
- (c) Mathematics and Natural Philosophy.
- (d) Semitic Languages.
- (e) Indian Languages.
- (f) English (Language, Literature, and British History).<sup>1</sup>
- (g) Modern Languages and Literature (*i.e.*, French, German, Italian, or Spanish).
- (h) History.
- (i) Economic Science [*i.e.*, Political Economy with either (a) Moral Philosophy or (b) History as supplementary Honours Subjects].<sup>2</sup>

(2) Every Candidate shall take up at least five subjects. Two of these subjects, under separate Professors or Lecturers, must be selected from the Candidate's Honours Group; and the five subjects shall include one from each of the Departments of Language and Literature, Mental Philosophy, and Science, set forth in Section IX. of this Ordinance.

(3) Every Candidate shall attend seven Classes, taking two Classes (one of which shall be an Honours Class) in each of his Honours subjects.<sup>3</sup>

(4) A Candidate who has obtained Honours in any one Group, may, before graduating,<sup>4</sup> present himself again for examination in a second Honours Group. In such a case, he shall not be required to attend more than two additional Classes, which shall be Honours Classes in the second Group.

(5) The examination in the subjects comprised in the Candidate's Honours Group shall be of a higher standard than that required for the ordinary degree of Master of Arts. In his other subjects the standard shall be that required for the ordinary degree.

<sup>1</sup> The Senatus Academicus, in determining the courses to be attended within the Honours Group entitled "English (Language, Literature, and British History)," and the character of the examination specified in Section XI., sub-section 1 (f), shall regard English Literature as constituting the chief subject of the Group, the linguistic and historical subjects being regarded as subsidiary thereto.

<sup>2</sup> This Group of Honours was instituted by Ordinance No. 160, issued by the Universities Commission on 10th May, 1897, and approved by Her Majesty in Council on 19th May, 1898.

<sup>3</sup> The Senate, on 6th April, 1899, made the following regulation:—No Honours Class can be taken for graduation purposes either before or in the same session as an Ordinary Class in the same subject.

<sup>4</sup> Ordinance No. 168, which was issued by the Universities Commission on 24th June, 1897, and approved by Her Majesty in Council on 19th May, 1898, enacts that, notwithstanding the provisions of this sub-section, a candidate who has already graduated may present himself for examination in any Honours Group within five years from the date of his first matriculation after having passed the Preliminary Examination. If he be successful in obtaining Honours, he shall receive a special certificate stating the Honours Group in which he has presented himself, and the class he has obtained in the Group.

(6) The Senatus shall, subject to the provisions of Sections XVI. to XX. of this Ordinance, from time to time determine what subjects shall be comprised in each Group, what subjects may be taken in half courses, and in which Group they may be taken: Provided that no new Group shall be instituted except by Ordinance of the University Court.

(7) The provisions of Section VIII. of this Ordinance shall apply to Candidates for Honours; but, in their case, not fewer than fifty meetings, on separate days, extending over an entire winter session, shall constitute a full course for an Honours Class; and not fewer than twenty-five meetings on separate days, extending over half a winter session, or an entire summer session, shall constitute a half course.

XII. (1) Every Candidate shall include Latin, or Greek, either in his Honours Group or as one of the subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.

(2) Greek shall be compulsory for candidates for Honours in Mental Philosophy. *Candidates for Honours in Mental Philosophy who have included Latin, but not Greek, as one of the subjects in which the standard of examination is the same as that required for the ordinary degree of Master of Arts, shall be deemed to have satisfied the provisions of this sub-section, if, before they offer themselves for the Honours examination in Mental Philosophy, they shall have passed a special examination in translating into English, passages from the works of Greek philosophical authors,<sup>1</sup> including passages from the works of such authors not previously prescribed.<sup>2</sup>*

(3) Candidates for Honours in English, or Modern Languages and Literature, or History, or *Economic Science*<sup>3</sup> (Groups *f, g, h, i*, of Section XI. hereof), shall include within the whole subjects taken for their degree (*a*) Logic and Metaphysics or Moral Philosophy and (*b*) Mathematics or Natural Philosophy.

(4) Every candidate shall have obtained a certificate for his attendance on the class of Latin or Greek, under sub-section (1) or (2) of this section before he offers himself for examination in his Honours group of subjects.<sup>4</sup>

(5) Candidates for Honours in Economic Science (Group *i*) of Section XI. hereof, who take Moral Philosophy as their supplementary Honours subject, may take a half course in the History of Civil Law and a half course in the Philosophy of Law, which, together, shall be deemed to constitute one of the subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.<sup>5</sup>

XIII. (1) The whole examination in the candidate's Honours Group must be taken at one time, and the whole examination necessary for graduation with Honours must be taken within five years from the date of the candidate's first matriculation after having passed the Preliminary Examination, unless that period shall be extended by the Senatus on

<sup>1</sup> The following works have been prescribed, viz. (*a*), Plato's *Phaedo* or any book of the *Republic*; (*b*) Aristotle's *Ethics*, Book I.

<sup>2</sup> The words in *italics* in this sub-section are taken from Ordinance No. 148.

<sup>3</sup> The words in *italics* are taken from Ordinance No. 160.

<sup>4</sup> This sub-section is taken from Ordinance No. 148.

<sup>5</sup> This sub-section is taken from Ordinance No. 160. See second note on p. 223.

special cause shown; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the extension.

(2) Candidates for Honours may be examined, at any time during their Curriculum, in the three subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.

XIV. (1) A candidate who has passed the examinations necessary for the ordinary degree of Master of Arts, but who has not yet graduated,<sup>1</sup> may present himself for Honours within five years from the date of his first matriculation after having passed the Preliminary Examination, and shall not be required to attend further classes:—subject always to the provisions of Section XII. hereof.

(2) No one shall be allowed to present himself a second time as a candidate for the degree of Master of Arts with Honours, who, upon examination, has failed to obtain Honours.

(3) A candidate shall be held to have presented himself who has notified his name for Examination in accordance with the University regulations. But it shall be in the power of the Senatus to relax this rule on special cause shown; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XV. (1) In each group there shall be three Grades of Honours, to be denominated respectively the First, Second, and Third Class. The names of the candidates entitled to Honours in each class shall be arranged in alphabetical order.

(2) For the degree of Master of Arts with Honours a Diploma shall be given setting forth the subjects in which he has taken Honours.

#### BOARDS OF STUDIES.

XVI. The Senatus of each University shall from time to time institute Boards of Studies corresponding as nearly as may be to the Departments of Study enumerated in Section IX. of this Ordinance.

XVII. Each Board of Studies shall consist of such Members of the Senatus and Lecturers in the University as the Senatus may from time to time select, and the Senatus shall appoint one of the Members of the Board to be Convener thereof.

XVIII. Before the end of each winter session each Professor and Lecturer in the said Departments of Study shall submit to the proper Board of Studies for its approval a syllabus of the subjects and books proposed for the work of his class for the next academical year. As soon as such approval has been given, the syllabus shall be transmitted to the Faculty of Arts for its consideration. The syllabus, with such

<sup>1</sup> Ordinance No. 168, which was issued by the Universities Commission on 24th June, 1897, and approved by Her Majesty in Council on 19th May, 1898, enacts that, notwithstanding the provisions of this sub-section, a candidate who has already graduated may present himself for examination in any Honours Group within five years from the date of his first matriculation after having passed the Preliminary Examination. If he be successful in obtaining Honours, he shall receive a special certificate stating the Honours Group in which he has presented himself, and the class he has obtained in the Group.

observations as the Faculty of Arts may see fit to make thereon, shall then be transmitted to the Senatus for its sanction.

In addition to the syllabus of subjects specified in Section XVIII., the Professors, and in the case where a subject is taught by a Lecturer only, the Lecturer or Lecturers, shall submit to the proper Board of Studies a syllabus of the subjects and books to be prescribed for the examinations for the Ordinary Degree of Master of Arts in the next academical year, and for the Honours examinations in the academical year next but one.

XLX. (1) Before the end of each winter session each Board of Studies shall prepare a scheme defining for the academical year next but one following, the classes which shall be deemed to be Honours Classes, and the subjects and courses of reading for Honours in its department, and shall report the same to the Faculty of Arts for its consideration. The scheme, with such observations as the Faculty of Arts may see fit to make thereon, shall then be transmitted to the Senatus for its sanction.

(2) Each Board shall in like manner make recommendations through the Faculty of Arts to the Senatus in regard to the half courses which may be sanctioned under the provisions of this ordinance, and the Lectures which may be given on special subjects.

XX. The Principal and the Dean of the Faculty of Arts shall be *ex-officio* Members of each Board of Studies. The Convener shall preside, and, in his absence, each meeting shall appoint its own Chairman, and every Chairman shall have a deliberative, and, in cases of equality, a casting vote.

#### GENERAL.

XXI. In the case of a foreign student whose native language is other than English, the standard required in English in the Preliminary Examination shall be such as the Joint Board of Examiners may deem sufficient. In the case of a student whose native language is other than European, the Senatus may accept as an alternative to Latin or Greek any other classical language, such as Sanskrit or Arabic, subject always to the provisions of Section IV., Sub-section 3 hereof.

XXII. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class as qualifying for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint; and in every such case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XXIII. The examination in all the languages in the Curriculum shall, as far as possible, be on the same standard in examinations for the same degree, and shall in all cases test the candidate's knowledge of the history and literature of the several countries.

XXIV. A candidate for the degree of Master of Arts shall not be deemed to have attended a class as part of the Curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.



XXV. A student, who has given attendance at classes recognized as qualifying for graduation during one or more sessions in any one or more of the Scottish Universities, may complete his Curriculum by giving attendance during the remainder of his course in another Scottish University, and may proceed to a degree in the latter University in the same way, in all respects, as if the previous part of his Curriculum had been taken therein: Provided always that every such student shall be bound to produce, to the satisfaction of the Senatus of the latter University, certificates of his having passed the Preliminary Examination, and of his attendance at the former University or Universities, and shall be examined in all the subjects necessary for a degree of Master of Arts by the Examiners of the University in which he completes his Curriculum, and in which alone he shall be allowed to graduate; and that no such student shall be admitted to a degree in any University unless he has given attendance in such University during the last winter session of his Curriculum, and one other winter session or two summer sessions.

XXVI. A candidate for the degree of Master of Arts with Honours, who has failed to be placed in any class, may, provided that in the opinion of the Examiners he has given evidence of sufficient attainments in any subject for the ordinary degree of Master of Arts, receive from them a certificate of having passed in such subject, which shall count *pro tanto* as part of the examination required under the regulations for the ordinary degree of Master of Arts.

XXVII. The degree of Master of Arts shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

XXVIII. A student who, previous to 1st October, 1892, commenced his course of study with a view to graduation in Arts in any of the Scottish Universities under the regulations<sup>1</sup> in force at the time in such University, may complete his course and become a candidate for the degree of Master of Arts, with or without Honours, in conformity with such regulations. And any such student who has passed the examination hitherto required for admission to a Curriculum of three sessions shall, if he desire to come under the regulations of this Ordinance, be exempted from the Preliminary Examination herein required.

XXIX. Students may attend any classes without having passed the Preliminary Examination within the meaning of this Ordinance, but such attendance shall not qualify for graduation.

Attendance on classes in the Faculty of Arts in which the teaching is on the standard at present recognised for the classes hitherto known as Junior or Middle Classes, shall in no case qualify for graduation.

XXX. It shall be competent for the University Court in each University to discontinue the Junior Classes, or Middle Classes, where such exist, in Latin, Greek, and Mathematics, when, in the opinion of the Court, the provision for Secondary Education in schools throughout the country is sufficient to render such classes no longer necessary.

<sup>1</sup> These regulations may be found at pp. 173, 174 of the *University Calendar* for 1900-1901, and in the *Calendars* for preceding sessions.

TABLE OF SUBJECTS OF EXAMINATION FOR THE DEGREE OF MASTER OF ARTS, ACCORDING TO THE DIFFERENT CLASSES OF DISTINCTION WHICH CANDIDATES MAY HAVE IN VIEW.

The Examination Questions set in April, 1907, in the several Departments and Subjects will be found towards the end of the *Calendar*.

IN	FOR ORDINARY DEGREE.	FOR HONOURS.
LATIN	<p><b>October, 1907.</b> HORACE, <i>Odes</i>, I, II, III, IV; or <i>Odessa</i> I.—III, with Book III, of <i>Propertius</i>. HORACE, <i>Satires</i>, II. VIRGIL, <i>Aeneid</i>, VII. CICERO, <i>Pro Cluentio</i>; or <i>Pro Roscio Amerino</i>; or <i>Pro Murena</i>. TACITUS, <i>Annals</i>, XV. ROMAN ANTIQUITIES (Ramsay, Caps. II to VIII inclusive, and Cap. XI). ROMAN HISTORY, from B.C. 753 to B.C. 241 (How &amp; Leigh's <i>History of Rome</i>). Unseen translation. <i>Note.</i>—Proficiency in Latin Prose Composition and in Grammar is indispensable. A knowledge of the matter of the books read is required, so as to enable a student to explain and comment on the text, and explain allusions.</p>	<p><b>October, 1906, and afterwards till October, 1909.</b>  VIRGIL, <i>Georgics</i>, I—III, and <i>Aeneid</i>, III—VI. HORACE, the <i>Satires</i> and <i>Epistles</i> with <i>Ars Poetica</i>. And any two (or more) of the following combinations: (a) LUCRETIUS, Books I, II (or III and IV to line 1019, with a play of PLAUTUS. (b) JUVENAL (the whole excepting <i>Sat.</i> II, VI, and IX). (c) PERSEUS, with Sellar's Selections from Martial, Books V—VIII. (d) CATULLUS (Clarendon Press Selection) and PROPERTIUS (Ramsay's Selection).</p>
	<p><b>April and October, 1908.</b> 1. TERENCE, <i>Andria</i>. 2. VIRGIL, <i>Georgic IV</i>. 3. CICERO, <i>Caesarianae</i> (<i>Pro Ligario</i>, <i>Pro Rege Deiotaro</i>, <i>Pro Marcello</i>). 4. LUCRETIUS, I; or the selection from MARTIAL read in the class. 5. TACITUS, <i>Agrippina</i> and <i>Germanicus</i>. ROMAN ANTIQUITIES (Ramsay, Caps. II to VIII inclusive, and Cap. XI). ROMAN HISTORY from B.C. 202 to A.D. 37 (How and Leigh's <i>History of Rome</i>). Unseen translation. <i>Note.</i>—Proficiency in Latin Prose Composition and in Grammar is indispensable. A knowledge of the matter of the books read is required, so as to enable a student to explain and comment on the text, and explain allusions.</p>	<p>VERSE. (a) LUCRETIUS, Books I, II (or III and IV to line 1019, with a play of PLAUTUS. (b) JUVENAL (the whole excepting <i>Sat.</i> II, VI, and IX). (c) PERSEUS, with Sellar's Selections from Martial, Books V—VIII. (d) CATULLUS (Clarendon Press Selection) and PROPERTIUS (Ramsay's Selection).</p> <p>PROSE. CICERO, the <i>Philippic Orations</i>, I—VI, or Tyrell's <i>Cicero in his Letters</i> (Macmillan) the whole. Livy, I—III, or XXI—XXIII. TACITUS, <i>Annals</i>, XI—XIV.</p> <p>With Latin Composition, History, and Antiquities, etc. Passages also from Books not prescribed will be set. A passage for translation into Latin Elegiac verse (voluntary) will be set.</p>

FOR HONOURS.

April, 1899, and afterwards till October, 1909.

HOMER, *Iliad*, I, VI, IX, XVI, XXII; and *Odyssey*, VI, X, XI, XIV, XXIII.  
 DRAMA. AESCHYLUS, *Agamemnon*, and Sophocles, *Antigone*.  
 HISTORY. EITHER THUCYDIDES, I, or HERODOTUS, VII.  
 PHILOSOPHY. PLATO, either *Phaedo* or *Republic*, II, IV, and V, to page 466, omitting pages 458-461 (= Chap. I-XIII, omitting VIII and IX). ARISTOTLE, either *Poetics*, omitting Chap. XX and XXI, or *Politics*, I-II, 6 inclusive.

TWO ABSTRACTSAL BOOKS<sup>1</sup> to be chosen by the Candidate subject to the special approval of the Professor, which must be applied for at least Three Months before the Examination. By a book is meant an amount of continuous Prose equal to a Book of Herodotus or Thucydides, or an amount of continuous Poetry equal to two plays.

Besides passages for translation from the above books, Questions will be set upon the Text, Interpretation, and Subject Matter. A pure and accurate English style in translation is considered of the highest importance.

Composition and Unseen Translation.

A general knowledge of History, Antiquities, Literature, and Grammar is also required.

<sup>1</sup> Candidates are required to bring with them to the examination clean texts of the Additional Books which they profess. The paper will contain only a reference, and not the passage printed in full.

FOR ORDINARY DEGREE.

October, 1907.

HOMER, *Iliad*, XXII.  
 EURIPIDES, *Andromache*.  
 DEMOSTHENES, *De Falsa Legatione*.  
 AESCHINES, *I. Dion*.  
 Bury's *History of Greece*.  
 Unseen Translation and Prose Composition, Greek Grammar, Literature, and Antiquities.

April and October, 1908.

HOMER, *Odyssey*, XXI, XXII.  
 AESCHYLUS, *Persae*.  
 PLATO, *Protagoras*.  
 ISOCRATES, *Panegyricus*.  
 Bury's *History of Greece*.  
 Unseen Translation and Prose Composition, Grammar, Literature, Antiquities, etc.

GREEK



IN	FOR ORDINARY DEGREE.	FOR HONOURS.
ENGLISH LITERATURE	<p><b>October, 1907.</b> For students of 1906-7:— See Syllabus in Calendar, 1906-7.</p>	<p>The subjects of examination in English<sup>1</sup> (Language, Literature, and British History) will be as follows:—</p>
	<p><b>April and October, 1908.</b> The subjects prescribed for study in the class. See p. 75. Students are advised to present themselves at the April or the October examination immediately following their Course, as the subjects studied in the class will be changed from year to year.</p>	<p>I. LANGUAGE.—Anglo-Saxon and Middle-English, with Sweet's <i>Anglo-Saxon Reader</i> and Morris and Sweet's <i>Spectators of Early English</i>, Parts I and 2. LITERATURE.—(1) General History of English Literature. Two papers will be set, of which the first will deal more particularly with Chaucer, Spenser, and the rise of the Drama. (2) One author to be selected by the candidate and approved by the Professor. (3) Shakespeare. (4) A dissertation on some subject approved by the Professor; the dissertation to be sent in to the Clerk of Senate not less than a month before the first day of the examination at which the candidate presents himself. III. History.—"The Renaissance and Reformation in English History," dealing with these movements, more especially in the 14th and 16th centuries. The books prescribed are:—Langland's <i>Piscon of Peter Plowman</i> (first seven passages); More's <i>Utopia</i>; Latimer's <i>Sermons before Edward VI.</i>; Hooker's <i>Ecclesiastical Polity</i> (Books I-IV). In April, 1909, and at subsequent examinations, the following alternative may be professed:—"The Puritan Revolution." The books prescribed as texts are: <i>The Life of Lord Herbert of Chabery</i>; Clarendon's <i>History of the Rebellion</i>, Books I, II, III to section 66 (the reference is to the Oxford edition of 1888); Milton's <i>Areopagitica</i>; and a general knowledge of Carlyle's <i>Letters and Speeches of Cromwell</i> will be required.</p>

<sup>1</sup> See p. 223, and first note at foot of page.

## FOR ORDINARY DEGREE.

## October, 1907.

- I. Translations into and from French.
- II. Questions on historical French grammar. Text-book: Darmesteter, *Grammaire historique de la langue française*.
- III. Essay in French on (a) the general history of French literature in the 15th and 16th century, (b) La Fontaine, Victor Hugo, and Michelet. Books prescribed: La Fontaine, *Fables*; Victor Hugo, *Extraits des Poésies* (Ed. Delagrave); Michelet, *Notre France*.
- IV. Oral Examination.—(1) Reading, translation, and explanation of a text studied in the class (see syllabus for work of class). (2) Conversation in French on the subjects of the Class Lectures.

## FRENCH

## April and October, 1908.

- I. Translation into French.
- II. Questions on historical French grammar. Text-book: Darmesteter, *Grammaire historique*, Paris II and IV.
- III. Essay in French on (a) the general history of French literature in the 18th and 19th centuries, (b) La comédie avant Molière et la comédie de Molière, Victor Hugo, poète. Books prescribed: Fauguet, *Études littéraires sur le 18<sup>e</sup> et le 19<sup>e</sup> siècles*, Molière, *Les Précieuses ridicules*, *Les Femmes savantes*, *Le Misanthrope*, *Le Tartuffe*, Victor Hugo, *Extraits des poésies* (Delagrave).
- IV. Oral Examination.—(1) Reading, translation, and explanation of a passage taken from one of the works mentioned under III (b), or from Michelet, *Notre France*. (2) Conversation in French on the subjects of the Class Lectures during Session 1907-8.

## FOR HONOURS.

## October, 1907, and afterwards till further notice.

- I. Translations from Old French and from English into Modern French. Translations into English. Essay in English on Historical French Grammar. Text-books: A. Darmesteter, *Grammaire historique de la langue française*; Brunot, *Histoire de la langue française*.
- II. and IV. Essays in French on French Literature (a) General History, (b) Special Study of one of the following periods: (1) The Middle Ages; (2) The 16th and 17th centuries; (3) The 18th and 19th centuries.
- V. Oral Examination—(a) Reading, Translation, and Explanation of a text selected from one of the following books:—Gaston Paris, *Chanson de Roland*, *Christine de Pisan*, *Moyen Age*, *Extraits des Chroniques françaises*; Jeanroy, *Montaigne's Essais*; Pellissier, *Extraits des poésies françaises du XVI<sup>e</sup> siècle*; (b) A question to be answered on a subject or author, selected by the candidate, and approved by the Lecturer at least a month before the Examination takes place; (c) French history in the 19th century.

IN	FOR ORDINARY DEGREE.	FOR HONOURS.
GERMAN	<p><b>October, 1907.</b></p> <p>(1) Translation from and into German. (2) The Grammar Lectures, and Brandt's Grammar. (3) General Outline of German Literature: special period, 1748-1805. (4) Goethe, <i>Tasso, Dichtung und Wahrheit</i> (Books I-IV.); Lessing, <i>Minna von Barnhelm</i>; Schiller, <i>Marie Stuart</i>; Kohlrausch, <i>Das Jahr 1813</i>. (5) Oral Examination.</p>	<p><b>April and October, 1907.</b></p> <p>I. Translation from English and Middle High German into Modern German; Historical German Grammar; Faust, Part I.</p> <p>II. Middle High German (a) either <i>Iwein</i> (Books I.-IV.), or <i>der arme Heinrich</i>; (b) <i>das Nibelungenlied</i> (I.-X.), or <i>Walthar von der Vogelweide</i>, (Lieder 1-50), or Old High German, or Gothic. After 1909, the subjects in Middle High German will be as follows: (a) <i>der arme Heinrich</i>; (b) <i>Iwein</i> (Books I.-IV.); (c) <i>das Nibelungenlied</i> (I.-X.).</p> <p>III. General History of German Literature to the year 1832, with a special knowledge of the Classical periods: Carlyle's Essays on Schiller and Goethe.</p> <p>IV. Oral Examination.</p> <p>Books prescribed: Wright, <i>Middle High German Primer</i>; Paul, <i>Mittelhoch-deutsche Grammatik</i>; "Deutsche Klassiker des Mittelalters," <i>der arme Heinrich</i>, <i>Iwein</i>, <i>das Nibelungenlied</i>, <i>Walthar von der Vogelweide</i>, published by Brockhaus, Leipzig; Kluge, <i>Geschichte der deutschen National-Litteratur</i>; Scherer, <i>Geschichte der deutschen Litteratur</i>; Behagel, <i>History of the German Language</i>; Faust (Part I.), Calvin Thomas; Sahr, <i>Sachs und Fischer</i>.</p>
	<p><b>April and October, 1908.</b></p> <p>(1) Unseen translation and Prose Composition. (2) The Grammar Lectures, and Brandt's Grammar, Part I. (3) General Outline of German Literature: special period, 1748-1805. (4) Schiller, <i>Wilhelm Tell</i>; Wallenstein, <i>Lager und Piccolomini</i>; Heine, <i>Hatzreise</i>; Fuld, <i>Die wilde Jagd</i>; Selections from Hans Sachs; Kohlrausch, <i>Das Jahr 1813</i>. (5) Oral examination.</p>	

IN	FOR ORDINARY DEGREE.	FOR HONOURS.
HEBREW	<p><b>October, 1907.</b></p> <p>The Second Book of Samuel. Psalms I.—XLII. Job I.—XIV. The History of Israel, from the foundation of the monarchy to the downfall of Jerusalem. Hebrew Archaeology; History of the Masoretic Text (Weir's <i>Short History</i>). Introduction to the books prescribed. Unseen translation; unpunctuated text to be pointed and translated; translation from English into Hebrew; and Grammar, Syntax, and Accents.</p> <p><b>October, 1908.</b></p> <p>The First Book of Samuel. Psalms XLIII.—LXXXII. The Books of Amos, Hosea, and Micah. The History of Israel, from the schism of the kingdom to the downfall of Jerusalem. Hebrew Archaeology; History of the Masoretic Text (Weir's <i>Short History</i>). Introduction to the books prescribed. Unseen translation; unpunctuated text to be pointed and translated; translation from English into Hebrew; and Grammar, Syntax, and Accents.</p>	<p>The two Books of Samuel. The Book of Job. Petermann's Selections from the Targums. The treatise <i>Aboda Zarâ</i>. Brody and Albrecht's <i>Ner Hahayim School of Pious</i>, numbers 32-39 and 74-87 inclusive. History and Antiquities of Israel to the fall of the Jewish State. Outline History of Jewish Literature to the close of the Talmud. Composition and Unseen Translation. Comparative Grammar of the Semitic Languages.</p>
ARABIC	<p>Qor'ân. The Suras contained in Nallino's <i>Chrestomathia Korani Arabica</i>. The Prose Extracts contained in Brillinow's <i>Chrestomathie aus Arabischen Prosa-schriftstellern</i>. Nöldeke's <i>Delectus Veterum Carminum Arabicorum</i>, pp. 53-63, and 110-114. History and Literature:—Sale's Preliminary Dissertation on the Koran. History of the Arabs and their literature to the death of the Caliph Othman. Unseen translation; unpunctuated text to be pointed; translation from English into Arabic; Grammar, Syntax, and Prosody.</p>	<p>Qor'ân: Nallino's <i>Chrestomathia</i>; Al Fakhri (Derenbourg's Edition), pp. 101-458; Hariri, Maqâmât, VII., IX., XIII., XXV., XXXIII., and XXXVIII.; Majma'i 'Adab, Vol. VI., pp. 184—209, 226—230, 264—270, 286—312. History of the Caliphate to the fall of Bagdad.</p>



IN	FOR ORDINARY DEGREE.	FOR HONOURS.
CELTIC	<p><i>Old Gaelic, Scyllge Conclaind</i> (in Windisch's <i>Irish Texts</i>); <i>Liadaid and Corithir</i> (ed. Kuno Meyer). Four Old Irish songs of Summer and Winter (ed. Kuno Meyer). Grammatical and Literary Questions.</p> <p><i>Modern Gaelic</i>. Alexander Macdonald of Ardmurchlan's <i>Gaelic Poems</i>; <i>Lighlacs Cais' O'Gin</i> (ed. Henderson). Translations from English into Modern Gaelic, and from Gaelic authors not prescribed.</p> <p><i>History and Literature</i>. The McCallum Lectures by Professor Magnus Maclean. More minute study of the literary bearings of the works prescribed.</p>	
LOGIC	<p>The Class Lectures, Berkeley's <i>Principles of Human Knowledge</i> (in Fraser's <i>Selections from Berkeley</i>).</p>	<p><b>October, 1906, and until further notice.</b></p> <p>(a) <i>Logic and Psychology</i>: the subjects of the Class Lectures, Ordinary and Advanced. Candidates will be expected to have read some of the larger modern treatises on <i>Logic</i>, such as Mill, Venn, Sigward, or Bosanquet, and a treatise on <i>Psychology</i> such as Stout's <i>Analytic Psychology</i> or James's <i>Principles of Psychology</i>.</p> <p>(b) <i>Metaphysics</i>: (1) Kant's <i>Kritik of Pure Reason</i>. (2) Two of the following subjects, one to be a subject in Greek Philosophy and one in Modern Philosophy: (i.) History of Greek Philosophy up to Aristotle; (ii.) Aristotle and the Post-Aristotelian systems (exclusive of Neo-Platonism); (iii.) Descartes and Cartesianism, Spinoza and Leibniz; (iv.) Locke, Berkeley and Hume; (v.) Hegel's smaller <i>Logic</i> (Wallace's translation).</p>

IN	FOR ORDINARY DEGREE.	FOR HONOURS.
<p><b>MORAL PHILOSOPHY</b></p>	<p>The Professor's Lectures during the session in which the student examined has attended the Moral Philosophy Class and the <i>Republic</i> of Plato (translated by Davies and Vaughan).</p>	<p>Candidates for Honours will be examined in :—(1) The Professor's Lectures; (2) Aristotle's <i>Ethics</i> (omitting Books VII and VIII), Aristotle's <i>Politics</i>, Books I—IV, and, in connection therewith, the History of Ethical Thought in Greece previous to Aristotle; (3) Spinoza's <i>Ethics</i>; (4) The Ethical Theory of Kant, together with Caird's <i>Philosophy of Kant</i>, Books II, III, IV, and Green's Prolegomena to Ethics; (5) the general history of Modern Hedonism; (6) The history of Political Theories from Hobbes to Rousseau.</p> <p>Candidates are, in addition, expected to offer for examination some book, subject, author, or period; or to submit a thesis on a subject in Philosophy, <i>either in Logic or in Moral Philosophy</i>, such thesis to be lodged by the candidate when entering his name for examination.</p>
<p><b>POLITICAL ECONOMY</b></p>	<p>The Lectures and Text-books of the session in which the student has attended the class.</p>	<p>In October, 1906, and until further notice the subjects of examination for Honours in Economic Science will be as follows :—</p> <p>I. <b>Political Economy.</b> The subjects of the Class Lectures, ordinary and Advanced. Prescribed books: Bosanquet, <i>Philosophical Theory of the State</i>; Marshall, <i>Principles of Economics: East India, Public Finance</i>; Seligman, <i>Essays in Taxation</i>; Ingram, <i>History of Political Economy</i>; Nicholson, <i>Money and Monetary Problems</i>; Warner, <i>Landmarks of English Industrial History; Memoranda on Classification and Location of Imperial and Local Trades</i> (Blue-book), pp. 66—175; <i>British and Foreign Trade and Industry</i>—First Series, 1903, Second Series, 1904 (Board of Trade Blue-books); Poor Law Commissioners' Report of 1894 (Blue-book reprinted, 1905). Candidates will be required to submit a thesis on some subject to be approved by the Professor.</p>
<p><b>HISTORY OF CIVIL LAW</b></p>	<p>The Class Lectures (see p. 137).</p>	<p>II. <i>Either (a) Moral Philosophy</i>—see the regulations for Honours in Moral Philosophy <i>at supra</i>.</p> <p>Or (b) <b>History.</b> The Course by the Lecturer on British History. British Economic History to be studied in Cunningham, <i>Growth of English Industry and Commerce</i>; and Ashley, <i>Economic History</i>.</p>
<p><b>PHILOSOPHY OF LAW</b></p>	<p>Holland's <i>Jurisprudence</i>. Maine's <i>Ancient Law</i>. Kant's <i>Philosophy of Law</i> (Hastie's translation).</p>	

## October 1907 and April 1908.

The Class Lectures; Bosanquet, *Education of the Young in the Republic of Plato*; Burnet, *Aristotle on Education*, pp. 1-II., 84-141; Ascham, *Schoolmaster* (Cassell & Co.), pp. 10-105; Rousseau, *Emile*, Books II., III.; Adams, *Herbartian Psychology applied to Education*, chaps. II., III., IV., VI., X.; Horbert Spencer, *Education*.

## EDUCATION

Euclid, First Six Books, and Book XI, 1-21. Analytical Geometry of straight line and circle.  
Algebra, including Quadratic Equations, Progressions, and Binomial, Exponential, and Logarithmic Theorems.  
Plane Trigonometry, including the Solution of Triangles by the aid of Logarithmic tables.

## MATHEMATICS

In addition, Plane and Spherical Trigonometry; Analytical Geometry of two and three Dimensions; Differential and Integral Calculus; Differential Equations; and special subjects given in summer courses.

Higher Dynamics (Statics and Kinetics of a particle and of a rigid body). In addition to the special subjects treated in the Higher Natural Philosophy Class (Division A) during the session of attendance, the candidate must profess a knowledge of one of the following:—Hydrodynamics, Conduction of Heat, Magnetism and Electricity, Light, Sound, Elasticity. Propositions to be given in on

The subjects explained in the class. Dynamics, Acoustics, Heat, Light, Magnetism, and Electricity.

## NATURAL PHILOSOPHY

The questions set will be such as to test the candidate's knowledge of Mathematical and Experimental Physics. It is to be understood that the Class Lectures are intended to be merely an aid to the student's reading and independent work, and are not to be expected to be directly or exclusively the subject of examination in the branches of science of which they treat.

The Professor's Lectures during the session or sessions in which the student has attended the class, and Popular Astronomy.

## ASTRONOMY

IN	FOR ORDINARY DEGREE.	FOR HONOURS.
CHEMISTRY	<p>Theory: Principles of Chemistry, Chemistry of the Non-Metallic and the Principal Metallic Elements. Outlines of Organic Chemistry.</p> <p>Practical: Inorganic preparations. Qualitative analysis, including mixtures.</p> <p>Text-books: Newth's <i>Inorganic Chemistry</i> or Bloxam's <i>Chemistry</i> or Richter's <i>Inorganic Chemistry</i>; Ramsay's <i>Modern Chemistry</i>; Perkin and Kipping's <i>Organic Chemistry</i> or Rensen's <i>Organic Chemistry</i>.</p>	
ZOOLOGY	<p>The Elementary Lectures and Practical Work, together with one course of more advanced instruction.</p> <p>Text-books by Shipley &amp; MacBride; Marshall &amp; Hurst; Wallace's <i>Darwinism</i>; Weismann's <i>Evolution Theory</i>.</p> <p>An adequate knowledge of the Elements of Botany will be expected together with a general knowledge of Classification of Plants, and especially of the following natural orders of Phanerogams: Taxaceae, Pinaceae; Junaceae, Liliaceae, Amarillidaceae, Iridaceae, Araceae, Cyperaceae, Gramineae, Alismaceae, Potamogetonaceae, Orchidaceae; Salicaceae, Cupuliferae, Urticaceae, Polygonaceae, Chenopodiaceae, Caryophyllaceae, Ranunculaceae, Nyctagaceae, Cruciferae, Papaveraceae, Violaceae, Hypericaceae, Droséraceae, Malvaceae, Geraniaceae, Euphorbiaceae, Umbelliferae, Saxifragaceae, Rosaceae, Leguminosae, Loranthaceae; Ericaceae, Primulaceae, Apocynaceae, Boraginaceae, Solanaceae, Scrophulariaceae, Labiate, Rubiaceae, Valerianaceae, Campanulaceae, Compositae.</p> <p>The following books are suggested: Strasburger, <i>Text-Book of Botany</i> (second English edition); Scott, <i>Structural Botany</i>; Willis, <i>Flowering Plants and Ferns</i>; Hooker, <i>Student's Flora of the British Islands</i>.<sup>1</sup></p>	
BOTANY		
GEOLOGY <sup>2</sup>	<p>An adequate knowledge of the following: The Materials of the Earth's Crust; Physical Geology; Structural Geology; Elementary Palaeontology; Stratigraphy; Elementary Mineralogy; Soils; Water Supply; General Geology and Scenery of Scotland, with especial reference to the Glasgow Basin.</p>	

<sup>1</sup> The syllabus of work in Botany required for M.A. is under reconsideration.

<sup>2</sup> The examination in this and the three preceding subjects will be oral and practical, as well as by written papers.

IN	FOR ORDINARY DEGREE.	FOR HONOURS.
HISTORY	<p>Outlines of European (including British) History, A.D. 4-6-1453.</p>	<p><b>Up to and including October, 1907.</b></p> <p>Candidates will be examined in the following subjects:—</p> <p>(1) British History to 1880. This subject includes the History of England and Scotland, the History of Ireland from the reign of Henry II., and the History of the Colonial Empire of Great Britain. (2) The General History of the English Constitution. (3) The Constitutional Law and Custom of Great Britain and the United States of America. Prescribed books: Dicey, <i>Law of the Constitution</i>; Anson, <i>Law and Custom of the Constitution</i>; Bryce, <i>American Commonwealth</i>. (4) The growth of the English Constitution to the close of the reign of Edward I. Prescribed book: Stubbs, <i>Select Charters</i>. (5) One of the following periods of Foreign History at the choice of the Candidate (a) 800-1272, (b) 1453-1648, (c) 1740-1878.</p>
CONSTITUTIONAL LAW AND HISTORY	<p>The Class Lectures with Taswell-Langmead's <i>English Constitutional History</i> and Dicey's <i>Law of the Constitution</i>.</p>	<p>Candidates may, in addition, submit through the Professor of History a thesis on some subject of British or Foreign History to be approved by the Board of Examiners for Honours in History. This should, as far as possible, be based on the leading original authorities on the subject of which it treats. Such thesis, when offered, will be considered as forming an integral part of the examination.</p> <p>N.B.—In and after April, 1908, the following will be substituted for (5):—Outlines of European History, A.D. 476-1453.</p>
ROMAN LAW	<p>Institutes of Justinian (ed. Moyle or Sanders), and the Class Lectures.</p> <p>Note.—Candidates who aim at a degree in Law are recommended, in addition to the above, to profess <i>Dig.</i>, lib. XVIII, Tit. I. The title is translated and annotated by Mackintosh—Roman Law of Sale.</p>	

## ORDINARY DEGREE OF M.A.

The following directions may be helpful to a Student in arranging his course :

- I. *A Student who has not passed the whole Preliminary Examination, but who has passed the Higher Standard in either Latin or Greek or Mathematics, may attend the qualifying class in that subject, but may not offer himself for examination in it until he has passed the whole Preliminary Examination.*

He cannot, however, proceed to Graduation until he has attended qualifying classes in the University for three academic years after he has completed his Preliminary Examination.

- II. *A Student who has passed the whole Preliminary Examination must attend full courses in at least seven subjects, spread over at least three years, and must be examined in these subjects.*

Of these subjects *three* must consist of one from each pair of the following alternatives :

- (1) Latin or Greek.
- (2) Logic or Moral Philosophy.
- (3) Mathematics or Natural Philosophy.

The *fourth* subject must consist of any of the above not already taken, or of Chemistry.

The *fifth* subject must be either English or a Modern Language, or History.

The *sixth* and *seventh* subjects may consist of any one not already taken, from those enumerated in Section IX. of the Ordinance, and for which teaching is provided.

- III. Students are advised to attend the qualifying classes which they select, as far as possible according to the following scheme :

First Year.	Second Year.	Third Year.	Fourth Year.
Any of the following: Latin. Greek. French. German. Italian. Celtic. History. Mathematics. Chemistry. Zoology. Botany. Geology.	Any of the former not already taken, together with Logic. Political Economy. Natural Philosophy. Hebrew. Arabic. English.	Any of the former not already taken, together with Moral Philosophy. Education. Constitutional Law. Roman Law. Astronomy.	Any of the former not already taken.

*Caution.*—Students who desire to attend a class in any Language other than Latin or Greek or English, must be careful,

In the case of French, German, or Italian, that they have passed the Preliminary Examination ; and

In the case of Celtic, Hebrew, Arabic, or Syriac, that they have passed a specially qualifying Examination. For Hebrew and Arabic preparatory classes are held, and may be taken in the Students' first year.

For *Half-courses* see Section viii. (1) and (2) of the Ordinance.

#### DEGREE OF M.A. WITH HONOURS.

Students who propose to graduate with Honours may with advantage consult the following synopsis of the conditions attaching to the several Groups of Honours:—

I. The Degree of M.A. with Honours may be taken at present in any of the following *Groups*, there being two subjects in each Group:

- (a) Classics, viz.  $\begin{cases} (1) \text{ Latin.} \\ (2) \text{ Greek.} \end{cases}$
- (b) Mental Philosophy, viz.  $\begin{cases} (1) \text{ Logic.} \\ (2) \text{ Moral Philosophy.} \end{cases}$
- (c) Mathematics and Natural Philosophy, viz.  $\begin{cases} (1) \text{ Mathematics.} \\ (2) \text{ Natural Philosophy.} \end{cases}$
- (d) Semitic Languages, viz.  $\begin{cases} \text{Hebrew.} \\ \text{Arabic.} \end{cases}$
- (e) [Indian Languages.]
- (f) English, viz.  $\begin{cases} (1) \text{ English Language and Literature.} \\ (2) \text{ British History.} \end{cases}$
- (g) Modern Languages, viz.  $\begin{cases} (1) \text{ French.} \\ (2) \text{ German.} \end{cases}$  or  $\begin{cases} (1) \text{ French.} \\ (2) \text{ Italian.} \end{cases}$  or  $\begin{cases} (1) \text{ German.} \\ (2) \text{ Italian.} \end{cases}$
- (h) History, viz.  $\begin{cases} (1) \text{ History.} \\ (2) \text{ Constitutional Law and History.} \end{cases}$
- (i) Economic Science, viz.  $\begin{cases} (1) \text{ Political Economy.} \\ (2) \text{ Moral Philosophy, or History.} \end{cases}$

#### II. *Conditions of Examination:*

- (1) The whole examinations necessary for graduation with Honours must be taken within five years from the date of the Candidate's first matriculation after having passed the Preliminary Examination, unless that period shall be extended by the Senatus on special cause shown.
- (2) The Candidate is examined in at least five subjects. (a) *Two* of these are his two *Honours* subjects (e.g. Logic and Moral Philosophy, if his group is Mental Philosophy). The examinations in the Honours subjects must be taken at one time, and not until the Candidate has obtained his certificate of attendance on the ordinary class of Latin or Greek. (b) In the other *three* subjects the examination is that for the *Ordinary* degree. The Candidate may offer himself for examination in them, together or apart, at any time or times during his curriculum, after he has attended the appropriate classes.

- (3) Under the restrictions noted below [see (4) and III. (2)], the Candidate may choose his three Ordinary degree subjects from the following list:

Latin.	Logic and Metaphysics.	Chemistry.
Greek.	Moral Philosophy.	Zoology.
English.	Political Economy.	Botany.
French.	Education (Theory,	Geology.
German.	History, and Art of).	History.
Italian.	Mathematics.	Constitutional Law and History.
Hebrew.	Natural Philosophy.	Civil, <i>i.e.</i> Roman Law.
Arabic.	Astronomy.	

- (4) Candidates in the various Honours Groups are restricted in their choice among the Ordinary Degree subjects to the following extent. They must choose

In Group (a) *Classics*: one subject from each of the following sets of Ordinary classes:

- (i) Logic, Moral Philosophy, Political Economy, Education.
- (ii) Mathematics, Natural Philosophy, Astronomy, Chemistry, Zoology, Botany, Geology.
- (iii) Any subject for the Degree except the two already chosen.

In Group (b) *Mental Philosophy*: one subject from each of the following sets of Ordinary classes:

- (i) Latin, Greek. If the Greek class has not been attended and the examination for Ordinary Degree on Greek passed, the student who chooses Latin as his subject in this set is required to pass a special examination in Greek, and this special examination he must pass before he offers himself for the Honours examination. [See the paragraph to which the first footnote on p. 224 refers.]
- (ii) Mathematics, Natural Philosophy, Astronomy, Chemistry, Zoology, Botany, Geology.
- (iii) Any subject for the Degree except the two already chosen.

In Group (c) *Mathematics and Natural Philosophy*: one subject from each of the following sets of Ordinary classes:

- (i) Latin, Greek.
- (ii) Logic, Moral Philosophy, Political Economy, Education.
- (iii) Any subject for the Degree except the two already chosen.

In Group (d) *Semitic Languages*: one subject from each of the following sets of Ordinary classes;

- (i) Latin, Greek.
- (ii) Logic, Moral Philosophy, Political Economy, Education.
- (iii) Mathematics, Natural Philosophy, Astronomy, Chemistry, Zoology, Botany, Geology.

In Groups (f) *English*,  
 (g) *Modern*  
*Languages*,  
 (h) *History*,  
 { one subject from each of the following  
 sets of Ordinary classes:  
 (i) Latin, Greek.  
 (ii) Logic, Moral Philosophy.  
 (iii) Mathematics, Natural Philosophy.



In Group (i) *Economic Science*: if History be the second subject chosen, one subject from each of the following sets of Ordinary classes:

- (i) Latin, Greek.
- (ii) Logic, Moral Philosophy.
- (iii) Mathematics, Natural Philosophy.

If Moral Philosophy be the second subject chosen, one subject from each of the following sets of Ordinary classes:

- (i) Latin, Greek.
- (ii) Mathematics, Natural Philosophy.
- (iii) A half course in the History of Civil Law combined with a half course in Philosophy of Law, or any subject for the Degree except those already chosen. [See III. (2) below.]

### III. Attendance.

- (1) The Candidate must attend two classes, one of which shall be an Honours class, in each of his two *Honours* subjects, these two subjects being taught by separate Professors or Lecturers; and he cannot take an Honours class in a subject before, or in the same session as, an Ordinary class in that subject. All Honours classes meet on not less than fifty days in a session.
- (2) In order to qualify for his Ordinary degree examinations in the other three subjects, the candidate must attend classes in them. Most of the classes for the Ordinary degree meet on not less than one hundred days in a session. In place of such a full course, two half courses, each involving not less than fifty meetings, may be taken. The subjects in which half courses may be taken are: Latin, Greek, Hebrew, Arabic, Mathematics, Astronomy. A half course in any of these subjects can be combined only with a second half course in the same subject. There is also a half course in Philosophy of Law and in the History of Civil Law, and these two can be combined to form one subject, but only by those who select Moral Philosophy in the Group of Economic Science.

### IV. Additional Regulations with regard to Degree of M.A. with Honours.

- (1) A candidate who has obtained Honours in any one Group may, whether he has graduated or not, present himself again for examination in a second Honours Group. He is required to attend two additional classes, which shall be Honours Classes, in this second Group.
- (2) A Candidate who has passed the seven examinations necessary for the ordinary Degree of Master of Arts, whether he has graduated or not, may, without attending further classes, present himself for Honours within five years from the date of his first matriculation after having passed the Preliminary Examination: but he must satisfy the requirements as to subjects set out above under II. (4).
- (3) No one shall be allowed to present himself a second time as a candidate for the Degree of Master of Arts with Honours, who, upon examination, has failed to obtain Honours.

# TABLE OF EXAMINATIONS FOR THE DEGREE OF M.A., TO BE HELD DURING SESSION 1907-8.

HAVE BEEN PAID.

£1 1s. FOR EACH SUBJECT UNTIL £5 5s. SHALL

Fee.

Names to be given  
in and Fees paid to  
Assistant-Clerk  
(Matriculation  
office).  
Page 2

Subjects of  
Examination.

Names to be given in and Fees paid to Assistant-Clerk (Matriculation office). Page 2		Dates of Written Examinations and Hours at which the different Papers will be sat.	
		September—October, 1907.	March—April, 1908.
12th September or 12th March	Astronomy.	Saturday, 28th Sept., 9—12 noon.	Saturday, 28th March, 9—12 noon.
	" "	Monday, 30th Sept., 9—12 noon.	Monday, 30th March, 9—12 noon.
	Botany.	Do., do., 9—12 noon.	Do., do., 2—5 p.m.
	Chemistry.	Do., do., 2—5 p.m.	Do., do., 2—5 p.m.
	Zoology.	Tuesday, 1st Oct., 9—12 noon.	Tuesday, 31st March, 9—12 noon.
	Geology.	Saturday, 5th Oct., 9—12 noon.	Saturday, 28th March, 3—6 p.m.
	" (Practical).	Monday, 7th Oct., 9—12 noon.	Do., do., 9—12 noon.
	" "	Do., do., 2—4 p.m.	Monday, 30th March, 6—8 p.m.
	Mathematics (Ord. and Hon.).	Fri., 27th Sept., 9—12 noon & 3—6 p.m.	Fri., 27th Mar., 9—12 noon & 3—6 p.m.
	Education.	Sat., 28th Sept., 9—12 noon & 3—6 p.m.	Sat., 28th Mar., 9—12 noon & 3—6 p.m.
16th September or 10th March	History (Hon.).	Mon., 30th Sept., 9—12 noon & 2—5 p.m.	Mon., 30th Mar., 9—12 noon & 2—5 p.m.
	Constitutional Law & History.	Do., do., 9—12 noon.	Do., do., 9—12 noon.
	Roman Law.	Do., do., 2—5 p.m.	Do., do., 2—5 p.m.
	Mathematics (Hon.).	Do., do., 3—5 p.m.	Do., do., 3—5 p.m.
	History (Hon.).	Tue., 1st Oct., 9—12 noon & 2—5 p.m.	Tue., 31st Mar., 9—12 noon & 2—5 p.m.
	Moral Philosophy (Ord. & Hon.).	Do., do., 9—12 noon.	Do., do., 9—12 noon.
	Moral Philosophy (Hon.).	Do., do., 2—5 p.m.	Do., do., 2—5 p.m.
	History (Hon.).	Wed., 2nd Oct., 9—12 noon & 2—5 p.m.	Wed., 1st April, 9—12 noon & 2—5 p.m.
	Logic (Ord. and Hon.).	Do., do., 9—12 noon.	Do., do., 9—12 noon.
	Logic (Hon.).	Do., do., 2—5 p.m.	Do., do., 2—5 p.m.
	Political Economy.	Do., do., 6—9 p.m.	Do., do., 6—9 p.m.
	History (Ord. and Hon.).	Thur., 3rd Oct., 9—12 noon & 2—5 p.m.	Thur., 2nd April, 9—12 noon & 2—5 p.m.
	English Literature (Hon.).	Do., do., 9—12 noon & 2—5 p.m.	Do., do., 9—12 noon & 2—5 p.m.
	Mental Philosophy (Hon.).	Do., do., 2—6 p.m.	Do., do., 2—6 p.m.
	Nat. Philosophy (Ord. & Hon.).	Fri., 4th Oct., 9—12 noon & 2—5 p.m.	Friday, 3rd April, 9—12 noon & 2—5 p.m.
	English Literature (Hon.).	Do., do., 9—12 noon & 2—5 p.m.	Do., do., 9—12 noon & 2—5 p.m.
	German (Hon.).	Do., do., 2—5 p.m.	Do., do., 2—5 p.m.
	Eng. Literature (Ord. & Hon.).	Sat., 5th Oct., 9—12 noon.	Sat., 4th April, 9—12 noon.
	Latin (Ord.).	Do., do., 1—3 & 4—6 p.m.	Do., do., 1—3 & 4—6 p.m.
	English Literature (Hon.).	Do., do., 2—5 p.m.	Do., do., 2—5 p.m.
	French (Hon.).	Do., do., 2—5 p.m.	Do., do., 2—5 p.m.
	Latin and Greek (Hon.).	Do., do., 2—6 p.m.	Do., do., 2—6 p.m.
	Latin (Ord.).	Mon., 7th Oct., 9—11 a.m.	Mon., 6th April, 9—11 a.m.
	Latin (Hon.).	Do., do., 9—12 noon & 2—5 p.m.	Do., do., 9—12 noon & 2—5 p.m.
	Natural Philosophy (Hon.).	Do., do., 2—5 p.m.	Do., do., 2—5 p.m.
	English Literature (Hon.).	Tue., 8th Oct., 9—12 noon & 2—5 p.m.	Tues., 7th April, 9—12 noon & 2—5 p.m.
	German (Ord. and Hon.).	Wed., 9th Oct., 9—12 noon & 2—5 p.m.	Wed., 8th April, 9—12 noon & 2—5 p.m.
	Greek (Ord. and Hon.).	Thur., 10th Oct., 9—11, 12—2, & 3—6 p.m.	Thur., 9th April, 9—11, 12—2, & 3—5 p.m.
	Greek (Hon.).	Do., do., 9—12 noon & 2—5 p.m.	Do., do., 9—12 noon & 2—5 p.m.
	Hebrew.	Fri., 11th Oct., 9—12 noon & 2—5 p.m.	Friday, 10th April, 9—12 noon & 2—5 p.m.
	Celtic.	Do., do., 9—12 noon & 2—5 p.m.	Do., do., 9—12 noon & 2—5 p.m.

1 For Women students, Miss Galloway, Queen Margaret College.

## 2.—GRADUATION IN SCIENCE.

The Scottish University Commissioners (1889) have ordained that two Degrees in Science may be conferred by each of the Universities of Scotland—viz., Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.). These Degrees may be given in Pure Science and in Applied Science.

## Degrees in Pure Science.

The following are the provisions of Ordinances No. 12<sup>1</sup>, No. 42, No. 44, and No. 155 as they apply to this University :—

I. Two Degrees in Science may be conferred by the University of Glasgow—viz., Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.).

II. Every candidate for the Degree of Bachelor of Science must pass the Preliminary Examination prescribed by Ordinance No. 11 (Regulations for Degrees in Arts); and the conditions with respect thereto imposed by that ordinance (see pp. 213—221, 226) are applicable in all respects to candidates for the Degree of Bachelor of Science, except as follows:—(1) French or German may be substituted for Latin or Greek [See also Ordinance No. 11, Section XXI.] ; (2) Mathematics must be passed on the higher standard;<sup>2</sup> (3) a degree in Arts (not being a degree *honoris causa tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University specially recognised for the purpose by the University Court after consultation with the Senatus, exempts from the Preliminary Examination.

III. (1) Candidates for the Degree of Bachelor of Science must, in the course of not less than three academical years, attend at least seven courses of instruction, in subjects prescribed for examination under Sections VIII. and IX. below.

(2) Three of these courses must be in subjects prescribed for the First Science Examination under Section VIII.; and four must be in subjects prescribed for the Final Science Examination under Section IX.

IV. (1) Four of the seven courses must be taken in this University.

(2) Three may be taken in other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science: Provided that the fees for attendance at an approved Institution or under a recognised teacher in

<sup>1</sup> This ordinance was printed in full in the *University Calendar* for 1892-93, pp. 435-438, and the modifications made by Ordinance No. 42 were indicated, by means of square brackets, in the *University Calendar* for 1894-95.

<sup>2</sup> A student who, having passed the Arts Preliminary Examination in accordance with the provisions of Ordinance No. 11, has thereafter obtained a certificate of attendance on a qualifying class of Mathematics, shall not be required to pass any further examination in Mathematics as a condition of entering on the course of study for graduation in Science under the provisions of Ordinance No. 12. See Ordinance No. 44, Section V. Candidates for the Degree of B.Sc. in Pure Science may offer themselves for examination in Mathematics on the intermediate instead of on the higher standard; provided that in addition to the ancient or modern language already taken they also offer themselves for examination in a modern language as a fifth subject, such further examination to be on the standard prescribed by the Joint Board for the Medical Preliminary. Notwithstanding these provisions, candidates shall not be entitled to profess at the Final Science Examination Mathematics, Natural Philosophy, or Astronomy, unless they have passed the Preliminary Examination in Mathematics on the higher standard. See Ordinance No. 155, Section I.

Glasgow shall not be less than the fees exigible for the corresponding courses in the University.

V. All candidates, not matriculated students of the University, availing themselves of the permission to attend lectures at approved Institutions or by recognised teachers in Glasgow, shall at the commencement of each year of such attendance enrol their names in a book to be kept for that purpose in the University, paying a fee of the same amount as the Matriculation Fee paid by students of the University, and having in respect of such payment a right to the use of the Library of the University.

VI. (1) After receiving through the Faculty of Science the opinion of the Board of Studies, the Senatus determines from time to time the number of meetings of which a full course in any subject shall consist, and reports its determination to the University Court for its approval.

(2) After receiving through the Faculty of Science the opinion of the Board of Studies, the Senatus, with the approval of the University Court, may sanction half courses of not less than half the number of meetings which constitute a full course in the subject; but two half courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) It is the duty of each Professor and Lecturer annually at the end of each winter session to submit to the Board of Studies a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Board of Studies shall transmit the schemes to the Faculty of Science, who shall submit them to the Senate with such observations as they may think fit to make thereon. The Senatus transmits such schemes, with such observations as it may think fit to make thereon, to the University Court for its approval.

(4) It is the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science, for its consideration, a syllabus of the subjects and books proposed for the work of their classes during the next academical year. The Faculty of Science transmits such syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval.

VII. The provisions of the preceding section do not apply to approved institutions or recognised teachers outside Glasgow; but the University Court shall not grant or continue recognition to any institutions or teachers unless they shall be satisfied that their courses of instruction are equivalent to the courses sanctioned in the Universities of Scotland.

VIII. (1) There is a First Science Examination<sup>1</sup> in the three following subjects—viz., (1) Mathematics or Biology (i.e. Zoology and Botany): (2) Natural Philosophy; (3) Chemistry.

(2) The examination in all these subjects is the same as the examination in these subjects for the Ordinary Degree of Master of Arts.

(3) Candidates may present themselves in any one or more of these subjects at any examination held after they have attended a full course in the subject or subjects professed.

<sup>1</sup>This examination includes practical work in the subjects admitting of, or requiring it.

IX. (1) There is a Final Science Examination<sup>1</sup> on a higher standard in any three or more of the following subjects :—

- |   |  |
|---|--|
| 1. Mathematics.                           | 6. Physiology.                                 |
| 2. Natural Philosophy.                    | 7. Geology, including Mineralogy. <sup>2</sup> |
| 3. Astronomy.                             | 8. Zoology, including Comparative Anatomy.     |
| 4. Chemistry.                             | 9. Botany, including Vegetable Physiology.     |
| 5. Human Anatomy, including Anthropology. |  |

(2) The standard of this examination shall be as nearly as possible equivalent to that of the examination for the Degree of Master of Arts with Honours, where the subjects are different; and where the subjects are the same the examination shall be identical.

(3) A subject already taken under the preceding section for the First Science Examination may be taken also under this section for the Final Science Examination.

(4) Candidates presenting themselves for this examination must have attended four full courses of higher instruction, including practical or laboratory work, in the subjects professed, subject always to the provisions of Sections VI. and VII. hereof.

(5) The Final Science Examination shall be taken not less than one year after the candidate has passed the First Science Examination.

The Senate, with the approval of the University Court, has framed the following regulation for the Final Science Examination, viz. : A candidate shall be allowed the option of presenting himself in any one subject for the Final Science Examination, or in two, or in three or more at one time, provided always that if the candidate select Mathematics and Natural Philosophy, these subjects shall be taken together in one examination, in accordance with Ordinance No. 11, Section XIII. (1) and Ordinance No. 12, Section IX. (2).

X. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint, and in every case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XI. A candidate for the degree of Bachelor of Science shall not be deemed to have attended a class as part of the curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XII. It is competent to the Examiners for the degree of Bachelor of Science to report that a candidate has passed with special distinction in one or more of the subjects professed by him: and in such a case a diploma shall be given setting forth the subjects in respect of which the degree has been granted, and the subject or subjects in which special distinction has been obtained.

<sup>1</sup>This examination includes practical work in the subjects admitting of, or requiring it.

<sup>2</sup>The higher course in Geology, including Mineralogy, consists of fifty lectures together with practical Laboratory work.

## DEGREE IN APPLIED SCIENCE.

XIII. Degrees in Applied Science may be instituted and conferred according to regulations to be laid down in special Ordinances applicable to each University by the Commissioners under the Universities (Scotland) Act, 1889; or after the expiry of their powers by the University Court in each University.

XIV. The provisions of Sections II. to VIII. of this Ordinance inclusive, in so far as they relate to the Preliminary and First Science Examinations, shall be applicable in all respects to degrees in Applied Science instituted as aforesaid, except where special provision is made to the contrary in the special Ordinances aforesaid.

## DOCTORATE OF SCIENCE.

XV. Graduates of any University who have held the degree of Bachelor of Science for a term of five years, may offer themselves for the degree of Doctor of Science in the same University.

XVI. A candidate for the Degree of Doctor of Science shall present a thesis or a published memoir of work<sup>1</sup> to be approved by the Senatus (on the recommendation of the Faculty of Science when duly constituted): Provided that, if required by the Senatus, the candidate shall also be bound to pass such an examination as may from time to time be determined. [This examination is to be conducted by Examiners appointed under Ordinance No. 62, Section X. See page 277.]

The thesis shall be a record of original research undertaken by the candidate, and shall be accompanied by a declaration, signed by him, that the work has been done and the thesis composed by himself.<sup>2</sup>

## GENERAL.

XVII. A student who, at the time when this ordinance shall come into operation, shall have completed a part of his course of study with a view to graduation in Science in any of the Scottish Universities under regulations in force at the time in such University, and shall thereafter complete his course of study and pass the necessary examinations in conformity with such regulations,<sup>3</sup> or with the provisions of this ordinance, may become a candidate for the Degree of Bachelor of Science.

XVIII. The Degrees of Bachelor and Doctor of Science shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

XIX. This ordinance came into force on 1st October, 1892.

<sup>1</sup> The Thesis must be lodged on or before 11th January.

<sup>2</sup> Each successful Candidate for the Degree of D.Sc. is required to furnish to the University a certain number of copies of his Thesis, either printed or satisfactorily multiplied from a type-written copy, the number of copies in each case to be fixed by the Senate.

<sup>3</sup> Students who began their course previous to 1890 may qualify themselves for the Degree of B.Sc. under the old regulations, which are given in the *University Calendar* for 1884-85; those who began in 1890, or 1891, or 1892 may qualify under the regulations contained in the *Calendar* for 1892-93.

## OUTLINE OF EXAMINATIONS FOR B.SC. IN PURE SCIENCE.

*First Examination.*

MATHEMATICS—see p. 237. ZOOLOGY—see p. 238.

BOTANY—see p. 238. NATURAL PHILOSOPHY—see p. 237.

CHEMISTRY—see p. 238.

*Final Examination.*

MATHEMATICS—see p. 237 (Honours in Arts).

NATURAL PHILOSOPHY—see p. 237 (Honours in Arts).

## ASTRONOMY.

The examination is partly written and partly practical. In the written examination the candidate has to show thorough knowledge of Spherical Astronomy as treated in the Junior course of the Professor's lectures, and comprehension of the principles developed in the Senior course of lectures on celestial Dynamics. The practical examination embraces calculation of the ephemeris of a planet (which can be made at any time at home), and the determination of time and latitude by transit instrument and sextant. Also see page 94.

## CHEMISTRY.

The examination is partly written and oral, and partly practical. Principles and Theories of Chemistry; general inorganic and organic Chemistry; Elements of metallurgical and physical Chemistry. The practical examination embraces inorganic quantitative analysis, physical determinations such as molecular weight, organic analysis and preparations.

Books recommended:—Bloxam, *Chemistry*; or Thorpe, *Inorganic Chemistry*; or Richter, *Inorganic Chemistry*; Perkin & Kipping, *Organic Chemistry*; and Gatterman, *Practical Methods of Organic Chemistry*; Roberts-Austen, *Introduction to Metallurgy*; Walker, *Introduction to Physical Chemistry*.

## HUMAN ANATOMY.

In the written examination the same paper is set for all candidates whether of Medicine or Science. But the oral examination for candidates in Science is distinct. The candidate is required to show knowledge of Human Anatomy, systematic, topographic, microscopic and embryological, and of Physical Anthropology, especially the racial characters of skulls, but is not examined on the applications of Anatomy to Medicine and Surgery.

## PHYSIOLOGY.

Candidates for the final B.Sc. in Physiology will be expected to show a general knowledge of Physiology, and in addition a candidate must specialise on one or more of the following divisions of the subject :

(1) Physiological Chemistry. (2) Digestion and secretion. (3) Circulation and Respiration. (4) Nervous System and Muscles. (5) The Special Senses. The Professor should be consulted as to the books to be read upon each division of the subject.

Candidates are expected to have a full knowledge of the special department chosen as above.

The Examination consists of a written paper of three hours and a practical and oral examination.

The practical examination will occupy six hours and will consist of exercises in (a) Physiological Chemistry, (b) Histology, and (c) Practical work on Muscle, Nerve, etc., such as is overtaken in the Advanced Practical Class.

## GEOLOGY.

Candidates for the final B.Sc. in Geology will be required to show somewhat fuller knowledge of the subjects enumerated at p. 238; and in addition a more advanced knowledge of the principles and methods of petrography; the methods of palaeontology, as illustrated by the study of one special group of fossils; the stratigraphy of Scotland with especial reference to the Clyde basin and a knowledge of the principles of mining geology, including the study of ores and the chief economic mineral deposits, theories of Ore Deposition, the classification of ores, and the characters of some leading mining fields.

The essential laboratory text-book is *Cole's Aids in Practical Geology*, but candidates are expected to have read selected chapters from advanced text-books, general treatises and special memoirs, of which a list is supplied at the beginning of each session.

## ZOOLOGY, INCLUDING COMPARATIVE ANATOMY.

Candidates for the final B.Sc. examination in Zoology are expected to show a general knowledge of the classification of the Animal Kingdom, and of the structural and developmental characters of its various subdivisions.

Questions upon a more advanced standard will be set in regard to the Zoology of the Vertebrata and to such topics as have been treated in the two preceding Courses of advanced lectures on Invertebrates. There is a Practical Examination of at least six hours, part of which is *viva voce*, in which, in addition to their general knowledge of Zoology, candidates will be expected to show a certain amount of ability to dissect and carry out the ordinary processes of laboratory technique.

Candidates will also be expected to show a knowledge of the more



general problems of Zoology, *e.g.* Evolutionary Theory, the principles of Zoogeography, the main data regarding the processes of maturation and conjugation of the germ cells, etc. Special lectures will be arranged so far as possible to deal with such general portions of the subject.

The following text-books are recommended in addition to those used by the elementary class:—

*Text-book of Zoology* by A. Sedgwick. *Comparative Anatomy of Vertebrates* by Wiedersheim.

For reference in regard to special groups, Korschelt & Heider's *Invertebrate Embryology*, Hertwig's *Embryology of Vertebrates*, *The Cambridge Natural History*, Lankester's *Zoology*.

Students are further recommended to read Weismann's *Evolution Theory*, and Darwin's *Origin of Species*.

### BOTANY.

Candidates for the Final B.Sc. Examination in Botany will be expected to show an adequate knowledge of the External Morphology, Anatomy, and Physiology of Plants, and of the leading features in their Geological History. Also a general knowledge of the leading types, and classification of the main groups of Algae, Fungi, Bryophyta, and Pteridophyta.

A knowledge of the leading characters of the following families of Phanerogams will also be expected:

Cycadaceæ, Ginkgoaceæ, Taxaceæ, Pinaceæ, Gnetaceæ. Juncaceæ, Liliaceæ, Amaryllidaceæ, Iridaceæ, Palmæ, Araceæ, Cyperaceæ, Gramineæ, Alismaceæ, Potamogetonaceæ, Musaceæ, Zingiberaceæ, Orchidaceæ. Salicaceæ, Cupuliferæ, Urticaceæ, Polygonaceæ, Chenopodiaceæ, Caryophyllaceæ, Ranunculaceæ, Nymphaeaceæ, Cruciferae, Papaveraceæ, Violaceæ, Hypericaceæ, Droseraceæ, Cactaceæ, Malvaceæ, Geraniaceæ, Rutaceæ, Sapindaceæ, Euphorbiaceæ, Umbelliferæ, Saxifragaceæ, Rosaceæ, Leguminosæ, Myrtaceæ, Loranthaceæ. Ericaceæ, Primulaceæ, Apocynaceæ, Asclepiadaceæ, Boraginaceæ, Solanaceæ, Scrophulariaceæ, Labiatæ, Rubiaceæ, Valerianaceæ, Campanulaceæ, Compositæ.

The following books are suggested:—As a general text-book, Strasburger's *Textbook of Botany*, 2nd Engl. Ed. For more detailed information, especially of the Algae and Fungi, Warming's *Systematic Botany*. For use in the garden, especially for flowering plants, Willis' *Flowering Plants and Ferns*, 2nd Edn. For field work, Hooker's *Students' Flora of the British Islands*.

The reading of Candidates should also extend to more special treatises, such as Scott's *Studies in Fossil Botany*; Schimper's *Plant Geography*, etc., as well as to original papers, such as are referred to in the bibliography of Strasburger's *Textbook*.

There will be two three-hour papers, and two practical examinations [three hours each].

Candidates will also be examined orally.

TABLE OF EXAMINATIONS FOR DEGREE OF B.SC. IN PURE SCIENCE DURING SESSION 1907-8.

Names to be given in and Fees paid to Assistant-Clerk <sup>1</sup> (Matriculation Office), Date. <sup>2</sup>	FEE.	Subjects of Examination.	Dates of Written Examinations and Hours at which the different Papers will be set. The Oral Examinations in Science follow the Written at dates to be arranged.	
12th September, 1907, or 12th March, 1908.	£1 IS. FOR EACH SUBJECT UNTIL, £5 OS. SHALL HAVE BEEN PAID.	Math. (Ord. & Hon.), Astronomy, - Botany, - Astronomy, - Chemistry, - Mathematics (Hon.), Zoology, - Anatomy, - Physiology, - Nat. Phil. (Ord. & Hon.), Nat. Philosophy (Hon.), Geology (1st Paper), Geology (Practical), Geology (2nd Paper),	September - October, 1907.  Fri., 27th Sept., 9-12 noon & 3-6 p.m. Saturday, 28th Sept., 9-12 noon. Monday, 30th Sept., 9-12 noon. Do., do., 9-12 noon. Do., do., 2-5 p.m. Do., do., 3-5 p.m. Tuesday, 1st Oct., 9-12 noon. Do., do., 9-11 a.m. Do., do., 12-3 p.m. Fri., 4th Oct., 9-12 noon & 2-5 p.m. Monday, 7th Oct., 2-5 p.m. Saturday, 5th Oct., 9-12 noon. Monday, 7th Oct., 9-12 noon. Do., do., 2-4 p.m.	March - April, 1908.  Fri., 27th Mar., 9-12 noon & 3-6 p.m. Saturday, 28th Mar., 9-12 noon. Monday, 30th March, 9-12 noon. Do., do., 9-12 noon. Do., do., 2-5 p.m. Do., do., 3-5 p.m. Tuesday, 31st March, 9-12 noon. Do., do., 9-11 a.m. Do., do., 12-3 p.m. Fri., 3rd April, 9-12 noon & 2-5 p.m. Monday, 6th April, 2-5 p.m. Saturday, 28th March 3-6 p.m. Do., do., 9-12 noon. Monday, 30th March, 6-8 p.m.

<sup>1</sup> For Women students, Miss Galloway, Queen Margaret College.

<sup>2</sup> When Names are not given in and Fees are not paid on or before the stated dates, a late Entry Fee of Ten Shillings must be paid before the candidate can be admitted to examination. A candidate is not held to be entered for the examination until his name is entered, and all the necessary certificates, etc., lodged.

For Dates in regard to Science Preliminary Examination see page 218.

### Degrees in Science in Engineering.

The following are the provisions of Ordinance No. 23, Glasgow No. 2:—

I. Two Degrees in Science in Engineering may be conferred by the University of Glasgow, viz., Bachelor of Science in Engineering<sup>1</sup> and Doctor of Science in Engineering.

II. Every candidate for the degree of Bachelor of Science in Engineering must pass the Preliminary Examination prescribed by Ordinance No. 11 (Regulations for degrees in Arts); and the conditions with respect thereto imposed by the said ordinance (see pp. 213—221, 226) are applicable in all respects to this ordinance except as follows:—(1) French or German may be substituted for Latin or Greek [see also Ordinance No. 11, Section XXI.]; (2) *Mathematics must be passed on the higher standard*; (3) a degree in Arts (not being a degree *honoris causa tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University specially recognised for the purpose by the University Court after consultation with the *Senatus Academicus*, exempts from the Preliminary Examination; (4) *the Preliminary Examination must be passed before the candidate presents himself for any part of the First Science Examination, but not necessarily before the candidate enters on his curriculum.*

III. Candidates must in the course of not less than three academical years attend at least the nine courses of instruction prescribed under Section IX.

IV. (1) Five of the nine courses must be taken in this University. One of these courses must be a course in Engineering.

(2) Four may be taken in other Universities or institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science in Engineering: Provided that the fees for attendance at an approved institution in Glasgow or under a recognised teacher there shall not be less than the fees exigible for the corresponding courses in the University of Glasgow.

V. It is competent to the University Court to admit to the examinations for the degree of Bachelor of Science in Engineering, and to graduation, any candidate who presents the diploma of the Glasgow and West of Scotland Technical College, and who has passed the Preliminary Examination hereinbefore appointed: Provided that before such candidate shall be admitted to the Final Science Examination prescribed under Section XI. hereof:—

(1) He shall, after having received the said diploma, have attended in this University at least three full courses, during at least one academical year; and of these courses one at least shall be in Engineering.

<sup>1</sup> By order of the Council of the Institution of Civil Engineers the possession of the Degree of B.Sc. in Engineering exempts candidates applying for election into the Institution as Associate Members from passing the examination prescribed by the Council.

- (2) He shall, after having received the said diploma, have attended in this University such courses as will, along with the classes taken at the said College for the said diploma, be equivalent to the whole courses for the curriculum hereinafter instituted.

VI. The University Court may make regulations to enable candidates not matriculated students of the University availing themselves of the permission to attend Lectures at approved institutions or by recognised teachers in Glasgow, to obtain on payment of a fee not exceeding in amount the Matriculation Fee paid by the students of the University, a right to the use of the Library of the University.

VII. (1) The Senatus determines from time to time the number of meetings of which a full course in any subject shall consist, and reports its determination to the University Court for its approval.

(2) The Senatus, with the approval of the University Court, may sanction half courses of not less than half the number of meetings which constitute a full course in the subject; and two half courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) It is the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Senatus a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus shall transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(4) It is the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science, for its consideration, a syllabus of the subjects and books proposed for the work of their classes during the next academical year. The Faculty of Science shall transmit such syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval.

VIII. The provisions of the preceding section do not apply to approved institutions or recognised teachers outside Glasgow; but the University Court shall not grant or continue recognition to any institutions or teachers unless it shall be satisfied that their courses of instruction are equivalent to the courses sanctioned in the University of Glasgow.

IX. The subjects of study<sup>1</sup> shall be as follows:—

1. Mathematics, including Analytical Geometry, and Differential and Integral Calculus.
2. Natural Philosophy, including Applied Higher Mathematics.
3. Chemistry.
4. A course in the Physical Laboratory,<sup>2</sup> or in the Chemical Laboratory, or of Practical Chemistry.

<sup>1</sup> The words in *italics* in this section are modifications which the University Court, on representations by the Senate, made by virtue of the power conferred upon the Court by Section XIV. of this Ordinance.

<sup>2</sup> The Physical Laboratory must have been taken previously by those who take Electrical Engineering under 5, 6.

and either :—

- 5, 6. Two courses in Engineering,<sup>1</sup> including Laboratory Practice.
- 7, 8. Two courses of practical work in Drawing.
9. A course in one of the following :—
  - (a) Astronomy and Geodesy.
  - (b) Geology and Mineralogy.
  - (c) Naval Architecture.
  - (d) Engineering Laboratory, Mechanical or Electrical (Special Course). [This laboratory course cannot be taken concurrently with either of the laboratory courses specified under 5, 6.]
  - (e) Electricity—Pure and Applied.
  - (f) *Mining Engineering* (Class I. or Class II.).
  - (g) *Any half-course in Engineering not already taken under 5, 6.*

or :—

- 5, 6. Two courses in Naval Architecture with Marine Engineering.
- 7, 8. Two courses of practical work in Ship and Engineering Drawing.
9. A course in Engineering, including Laboratory Practice.

Provided that during the three years immediately subsequent to the date on which this ordinance shall come into force, the courses in Engineering herein prescribed shall not necessarily include Laboratory Practice.

IXA.<sup>2</sup> *The following is the curriculum for the Degree of B.Sc. in Mining Engineering :—*

**FIRST YEAR :** *Mathematics (Ordinary); Natural Philosophy (Ordinary); Chemistry; Chemical Laboratory; Mining, Class I. (50 meetings).*

**SECOND YEAR :** *Engineering, Class I.; Engineering, Class II. or III.; Mining, Class II. (50 meetings); Drawing; Geology and Mineralogy.*

**THIRD YEAR :** *Electrical Engineering, Class I.; Metallurgy; Metallurgical Laboratory; Mining, Class III. (25 meetings); Engineering Laboratory; Mining Geology (50 meetings).<sup>3</sup>*

*Provided that practical work in a mine shall be required of every candidate for the Degree of B.Sc. in Mining Engineering to such an extent and under such regulations as the Senate, with the approval of the University Court, may from time to time appoint.<sup>4</sup>*

Under this proviso, the following regulations, proposed by the Senate, were approved by the University Court :

1. Practical work in a mine shall be required for two periods of three months each, and the candidate must not be under sixteen years of age at the time of commencing this practical work.

<sup>1</sup>The Physical Laboratory must have been taken previously by those who take Electrical Engineering under 5, 6.

<sup>2</sup>This curriculum, having been arranged by the Senate, was sanctioned by the University Court on 18th June, 1903, in virtue of the power belonging to the Court according to Section XIV. of this Ordinance.

<sup>3</sup>The last four words were added by the University Court on 11th April, 1907.

<sup>4</sup>This amending paragraph was added by the University Court on 21st July, 1904.

2. The candidate must produce evidence satisfactory to the Senate that he has fulfilled this requirement.<sup>1</sup>

X. (1) There shall be a First Science Examination<sup>2</sup> in subjects 1, 2, 3, and 4 of the section immediately preceding.

(2) The examination in (1) Mathematics and (2) Natural Philosophy shall include the higher branches of Mathematics specified under Mathematics and the higher Mathematics included under Natural Philosophy in the section immediately preceding;<sup>3</sup> but it shall be optional to candidates to pass the same examination in either or both of these subjects as that required for the Ordinary Degree of Master of Arts: Provided that in that case they shall be required before graduation to pass a subsequent examination in the remainder of the subject or subjects.

(3) Candidates may present themselves in any one or more of the subjects of the First Science Examination at any examination held after they have attended a full course in the subject or subjects professed.

XI. (1) There shall be a Final Science Examination<sup>3</sup> in subjects 5, 6, 7, 8, and 9 of Section IX. hereof; and, if required, in the higher branches of Mathematics as provided in Section X., Sub-section 2 hereof.

(2) Candidates may present themselves in any one or more of these subjects at any examination held after they have passed the First Science Examination and have attended the required courses in the subject or subjects professed: Provided that for this purpose subjects 5, 6, 7, and 8, specified in Section IX. hereof shall be deemed one subject.

XII. A candidate for the degree of Bachelor of Science in Engineering shall not be deemed to have attended a class as part of the curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XIII. It is competent to the Examiners for the degree of Bachelor of Science in Engineering to report that a candidate has passed with special distinction in one or more of the subjects professed by him; and in such a case a diploma shall be given setting forth the subjects in respect of which the degree has been granted, and the subject or subjects in which special distinction has been obtained.

XIV. It is competent to the University Court of the University of Glasgow to modify from time to time the provisions as to curriculum

<sup>1</sup>The Secretary of State for the Home Department, on 29th September, 1904, approved of the University of Glasgow in respect of the Degree of B.Sc. in Mining Engineering and of the Certificate of Proficiency in Mining Engineering for the purposes of the Coal Mines Regulation Act (1887) Amendment Act, 1903.

<sup>2</sup>The Senate has authorised the Examiners in Mathematics and Natural Philosophy to return as having passed in the elementary part of either or both of these subjects any candidate who has attempted the examination in the higher branches of either or both and has failed to pass, provided that in the opinion of the Examiners the candidate has attained a standard equivalent to that required for the ordinary Degree of M.A.

<sup>3</sup>This examination includes practical work in the subjects admitting of, or requiring it: Provided that, in the case of Engineering Students, a practical examination shall be passed in Chemistry or Physics according as the Chemical or the Physical Laboratory Course has been chosen as part of the qualifying curriculum.

hereinbefore contained, in case such modification shall be rendered desirable by the development of Engineering science, or in consequence of further provisions having been made within or without the University for the study of any special branch of the said Science: Provided that in no case shall the number of full courses of study required be less than the number required for the Degree of Bachelor of Science in Pure Science, as specified in Ordinance No. 12.

#### DOCTORATE OF SCIENCE IN ENGINEERING.

XV. Graduates of the University of Glasgow who have held the degree of Bachelor of Science in Engineering for a term of five years, may offer themselves for the degree of Doctor of Science in Engineering in the said University.

XVI. A candidate for the Degree of Doctor of Science in Engineering shall present a thesis or a published memoir or work<sup>1</sup> to be approved by the Senatus (on the recommendation of the Faculty of Science when duly constituted): Provided that, if required by the Senatus, the candidate shall be bound to pass such an examination as may from time to time be determined.

The thesis shall be a record of original research undertaken by the candidate, or of important engineering work designed by himself, and actually carried out, and shall be accompanied by a declaration, signed by him, that these conditions have been satisfied.<sup>2</sup>

#### GENERAL.

XVII. Candidates who produce certificates that they have satisfied all the conditions prescribed by this ordinance, and who have passed the necessary examinations, shall be entitled to receive the degrees of Bachelor of Science in Engineering and Doctor of Science in Engineering, as the case may be, on payment of the fees required.

XVIII. A student who, at the time when this ordinance shall come into operation, shall have completed a part of his course of study with a view to graduation in Science in Engineering in the University of Glasgow, under regulations in force at the time therein, and shall thereafter complete his course of study and pass the necessary examinations in conformity with such regulations,<sup>3</sup> or with the provisions of this Ordinance, may become a candidate for the degree of Bachelor of Science in Engineering.

XIX. The degrees of Bachelor and Doctor of Science in Engineering shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum*.

XX. This Ordinance came into force from and after the date on which it was approved by Her Majesty in Council, viz., 26th June, 1893.

<sup>1</sup> The Thesis must be lodged on or before 11th January.

<sup>2</sup> See second note on page 248.

<sup>3</sup> Students who began their course previous to 1890 may qualify themselves for the Degree of B.Sc. under the old regulations, which are given in the *University Calendar* for 1884-85, those who began in 1890, or 1891, or 1892 may qualify under the regulations contained in the *Calendar* for 1892-93.

TABLE OF EXAMINATION FOR DEGREE OF B.SC. IN ENGINEERING DURING SESSION 1907-8.

Names to be given in and Fees paid to Assistant-Clerk 1 (Matriculation Office) Date. <sup>2</sup>	Fee.	Subjects of Examination	September—October, 1907.	March—April, 1908.
12th September, 1907, or 12th March, 1908.	£1 1s. FOR EACH SUBJECT UNTIL £6 6s. SHALL HAVE BEEN PAID.	Math. (Ord. & Hon.), Astronomy, - - - Astronomy, - - - Engineering Laboratory, Do. (Special), Electrical Engineering, Chemistry, - - - Do., do., 2-5 p.m. Mathematics (Hon.), Engineering Drawing, Naval Architecture, Ship Drawing, etc., Mining II., - - - Engineering, - - - Electrical Engineering, Engineering, - - - Mining III., - - - Mining I., - - - Nat. Phil. (Ord. & Hon.), Nat. Phil. (Hon.), Metallurgy, - - - Geology (1st Paper), Geology (Practical), Geology (2nd Paper), -	Fri., 27th Sept., 9-12 noon & 3-6 p.m. Sat., 28th Sept., 9-12 noon. Mon., 30th Sept., 9-12 noon. Do., do., 9-12 noon. Do., do., 2-5 p.m. Do., do., 2-5 p.m. Do., do., 2-5 p.m. Do., do., 2-5 p.m. Do., do., 3-5 p.m. Tue., 1st Oct., 9-12 noon & 2-5 p.m. Do., do., 9-11 a.m. Do., do., 2-5 p.m. Do., do., 2-5 p.m. Wed., 2nd Oct., 9-11 a.m. & 3-5 p.m. Do., do., 3-5 p.m. Thurs., 3rd Oct., 9-11 a.m. & 2-5 p.m. Do., do., 9-11 a.m. Do., do., 2-5 p.m. Fri., 4th Oct., 9-12 noon & 2-5 p.m. Sat., 5th Oct., 2-5 p.m. Do., do., 2-5 p.m. Do., do., 9-12 noon. Mon., 7th Oct., 9-12 noon. Do., do., 2-4 p.m.	Fri., 27th Mar., 9-12 noon & 3-6 p.m. Sat., 28th Mar., 9-12 noon. Mon., 30th Mar., 9-12 noon. Do., do., 9-12 noon. Do., do., 2-5 p.m. Do., do., 2-5 p.m. Do., do., 2-5 p.m. Do., do., 2-5 p.m. Do., do., 3-5 p.m. Tue., 31st Mar., 9-12 noon & 2-5 p.m. Do., do., 9-11 a.m. Do., do., 2-5 p.m. Do., do., 2-5 p.m. Wed., 1st April, 9-11 a.m. & 3-5 p.m. Do., do., 3-5 p.m. Thurs., 2nd April, 9-11 a.m. & 2-5 p.m. Do., do., 9-11 a.m. Do., do., 2-5 p.m. Fri., 3rd April, 9-12 noon & 2-5 p.m. Sat., 4th April, 2-5 p.m. Do., do., 2-5 p.m. Sat., 28th Mar., 3-6 p.m. Do., do., 9-12 noon. Mon., 30th Mar., 6-8 p.m.

<sup>1</sup> For Women students, Miss Galloway, Queen Margaret College.

<sup>2</sup> When names are not given in and Fees are not paid on or before the stated dates, a late Entry Fee of Ten Shillings must be paid before the candidate can be admitted to examination. A candidate is not held to be entered for the examination until his name is entered, the fee paid, and all the necessary certificates, etc., lodged.

For Dates in regard to the Preliminary Examination see page 218.



## CERTIFICATES OF PROFICIENCY IN ENGINEERING SCIENCE.

Certificates of Proficiency in Engineering Science will be granted to students who shall have gone through the following course of study, practical work, and examinations, to the satisfaction of the Board of Examiners:—

1. Mathematics, including Analytical Geometry and Differential and Integral Calculus.
2. Natural Philosophy—the work of the Ordinary Class.
3. Chemistry.

And either:—

- 4, 5. Two courses in Engineering, including Laboratory Practice.
- 6, 7. Two courses of practical work in Drawing.
8. A course in one of the following:—
  - (a) Astronomy and Geodesy.
  - (b) Geology and Mineralogy.
  - (c) Naval Architecture.
  - (d) Engineering Laboratory, Mechanical or Electrical (special course). [This laboratory course cannot be taken concurrently with either of the laboratory courses specified under 4, 5.]
  - (e) Electricity—Pure and Applied.
  - (f) Mining Engineering (Class I. or Class II.).
  - (g) Any half course in Engineering not already taken under 4, 5.

Or:—

- 4, 5. Two courses in Naval Architecture with Marine Engineering.
- 6, 7. Two courses of practical work in Ship and Engineering Drawing.
8. A course in Engineering, including Laboratory Practice.

Certificates of Proficiency in Mining Engineering will be granted to students who shall have gone through the following course of study, practical work, and examinations, to the satisfaction of the Board of Examiners:—

**FIRST YEAR:** Mathematics (Ordinary); Natural Philosophy (Ordinary); Chemistry; Chemical Laboratory; Mining, Class I. (50 meetings).

**SECOND YEAR:** Engineering, Class I.; Engineering, Class II. or III.; Mining, Class II. (50 meetings); Drawing; Geology and Mineralogy.

**THIRD YEAR:** Electrical Engineering, Class I.; Metallurgy; Metallurgical Laboratory; Mining, Class III. (25 meetings); Engineering Laboratory; Mining Geology (50 meetings).

No candidate is admitted to the special examination for either certificate, in any department, till he has given regular attendance upon, and duly performed the work of the prescribed course of study in that department.

**Candidates are not required to pass the Preliminary Examination.**

### Degrees in Science in Agriculture.

The regulations for the Degree of Bachelor of Science in Agriculture are contained in Ordinance No. 134 of the Universities Commission (1889), and are as follows:—

I. A degree of Bachelor of Science in Agriculture may be conferred by the University of Glasgow.

II. Every candidate for the degree of Bachelor of Science in Agriculture must pass the Preliminary Examination prescribed by Ordinance No. 11 [General, No. 6—Regulations for Degrees in Arts]; and the conditions with respect thereto imposed by the said Ordinance (see pp. 213—221, 226) shall be applicable in all respects to this Ordinance except as follows:—(1) French or German may be substituted for Latin or Greek; (2) Mathematics shall be passed on the higher standard;<sup>1</sup> (3) a degree in Arts (not being a degree *honoris causâ tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University specially recognised for the purpose by the University Court after consultation with the Senatus Academicus, shall exempt from the Preliminary Examination; (4) the Preliminary Examination must be passed before the candidate presents himself for any part of the First Science Examination, but not necessarily before the candidate enters on his curriculum.

III. (1) Candidates must in the course of not less than three Academical years, within the meaning of the Ordinance hereinbefore first mentioned, attend at least twelve courses of instruction, in the subjects specified in Section VIII. of this Ordinance.

(2) It shall be the duty of the Senatus to determine from time to time which of the said courses shall be full courses and which shall be half courses respectively, and also to determine the number of meetings of which such full courses and half courses respectively shall consist, and to report its determination to the University Court for its approval.

Under this subsection the Senate, with the approval of the University Court, has determined that of the subjects specified in Section VIII. of this Ordinance, Nos. 1, 2, 3, 4, 5, 6 and 10 shall be taught in full courses, and Nos. 7, 8, 9, 11 (a), 11 (b), 11 (c) and 12 in half courses, and that the number of meetings shall be those inserted in square brackets in Section VIII. opposite the several subjects.

- IV. (1) Five full courses or their equivalent (counting two half courses as one full course) must be taken in the University of Glasgow. The course in Agriculture and Rural Economy must also be taken in the University of Glasgow, if instruction in the said subjects be provided in the University, or in the West of Scotland Agricultural

<sup>1</sup>Candidates for the Degree of B.Sc. in Agriculture may offer themselves for examination in Mathematics on the intermediate instead of on the higher standard; provided that in addition to the ancient or modern language already taken they also offer themselves for examination in a modern language as a fifth subject, such further examination to be on the standard prescribed by the Joint Board for the Medical Preliminary.

College<sup>1</sup>: Provided always that that course in the said College shall be accepted as equivalent to a course in the University, subject to the following conditions:—

(a) The *Senatus Academicus* shall be represented on the governing body of the Agricultural College.<sup>1</sup>

(b) All future appointments to the Chair of Agriculture in the Agricultural College<sup>1</sup> shall be vested in a Joint Committee, consisting of three members of the University Court and of three members of the governing body of the Agricultural College.<sup>1</sup>

(2) The remainder of the said courses may be taken in other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science in Agriculture: Provided that the fees for attendance at an approved Institution in Glasgow or under a recognised teacher there shall not be less than the fees exigible for the corresponding courses in the University of Glasgow.

(3) Residence and practical work at a farm shall be required of each candidate to such an extent and under such regulations as the *Senatus*, with the approval of the University Court, may from time to time appoint.

Under this subsection the following regulations have been made by the Senate, with the approval of the University Court.

1. Residence and practical work at a farm for twelve months shall be required, and the candidate must not be under sixteen years of age when he commences the residence.

2. The residence must be for twelve consecutive months, except in special cases in which the Senate may grant recognition of residence during two shorter periods amounting together to at least twelve months.

3. The candidate must produce evidence, satisfactory to the Senate, that he has fulfilled these regulations.

V. All students availing themselves of the permission to attend the lectures of the teachers in the various departments of Agriculture in the West of Scotland Agricultural College, or of teachers in other approved institutions in Glasgow, or of other recognised teachers in Glasgow, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a fee of the same amount as the matriculation fee paid by the students of the University, and having in respect of such payment a right to the use of the Library of the University.

VI. (1) It shall be the duty of the Professors and Lecturers annually, at the end of each winter session, to submit to the *Senatus* a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The *Senatus* shall transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

<sup>1</sup> An ordinance was framed by the University Court on 6th August, 1900, and approved by His Majesty in Council on 24th July, 1901, which substituted the West of Scotland Agricultural College for the Glasgow and West of Scotland Technical College.

(2) It shall be the duty of the Professors and Lecturers annually, at the end of each winter session, to submit to the Faculty of Science for its consideration a syllabus of the subjects and books proposed for the work of their classes during the next Academical year. The Faculty of Science shall transmit such syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval.

VII. The provisions of the immediately preceding section shall not apply to approved institutions or recognised teachers outside Glasgow; but the University Court shall not grant or continue recognition to any institutions or teachers unless it shall be satisfied that their courses of instruction are equivalent to the courses sanctioned in the University of Glasgow, where such exist.

VIII. The subjects of study shall be as follows:—

1. 

{	Mathematics [100 meetings].				
or	Biology, <i>i.e.</i> ,				
{	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="vertical-align: middle;">{</td> <td style="vertical-align: middle;">Zoology [100 meetings, viz., 50 lectures and 50 and practical].</td> </tr> <tr> <td style="vertical-align: middle;">{</td> <td style="vertical-align: middle;">Botany, [100 meetings, viz., 50 lectures and 50 practical].</td> </tr> </table>	{	Zoology [100 meetings, viz., 50 lectures and 50 and practical].	{	Botany, [100 meetings, viz., 50 lectures and 50 practical].
{	Zoology [100 meetings, viz., 50 lectures and 50 and practical].				
{	Botany, [100 meetings, viz., 50 lectures and 50 practical].				
2. Natural Philosophy [100 meetings].
3. Chemistry [100 meetings and three months in Chemical Laboratory].
4. Agriculture and Rural Economy [100 meetings].
5. Agricultural Chemistry [100 meetings, viz., 50 lectures and 50 practical].
6. Geology [80 meetings, including 50 lectures and 28 practical demonstrations].
7. Veterinary Hygiene [50 meetings].
8. Agricultural Botany [50 meetings].
9. Agricultural Entomology [25 meetings].
10. Economic Science as applied to Agriculture [100 meetings].<sup>1</sup>
11. One of the following:—
  - (a) Forestry [50 meetings].
  - (b) Experimental Physics [50 meetings].
  - (c) Engineering [50 meetings].
12. Engineering Field Work [50 meetings].

IX. (1) There shall be a First Science Examination in the three following subjects—viz., (1) Mathematics or Biology (*i.e.*, Zoology and Botany); (2) Natural Philosophy; (3) Chemistry.

(2) The examination in all these subjects shall be the same as the examination in these subjects for the degree of Bachelor of Science,

<sup>1</sup> The Glasgow and West of Scotland Technical College contemplates the institution of a special class for the teaching of this subject in 50 meetings. Until this special class shall be instituted candidates are required to attend the ordinary class of Political Economy [100 meetings]. After both classes are available students will have the option of taking either. In the examination prescribed under Section X. every candidate shall be required to work a paper of questions on Economic Science as applied to Agriculture.

under the provisions of Ordinance No. 12 [General, No. 7—Regulations for Degrees in Science].

(3) Candidates may present themselves in any one or more of the subjects of the First Science Examination at any examination held after they have attended a full course in the subject or subjects professed.

X. (1) There shall be a Final Science Examination<sup>1</sup> in the remaining subjects (4 to 12 inclusive) specified in Section VIII. hereof.

(2) Candidates may present themselves in any one or more of these subjects at any examination held after they have passed the whole of the subjects comprised in the First Science Examination, and have attended the required courses in the subjects professed.

XI. A candidate for the degree of Bachelor of Science in Agriculture shall not be deemed to have attended a class as part of the Curriculum for that degree who does not present a certificate bearing, not only that he has given regular attendance, but also that he has duly performed the work of the class.

XII. The Examiners for the degree of Bachelor of Science in Agriculture shall be the Professors of the subjects in the Curriculum in the University of Glasgow, the Professor of Agriculture in the West of Scotland Agricultural College, and such additional Examiners as the University Court shall see fit to appoint.

#### GENERAL.

XIII. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, shall be entitled to receive the degree of Bachelor of Science in Agriculture, on payment of the fees required.

XIV. The degree of Bachelor of Science in Agriculture shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum*.

XV. This ordinance came into force from and after the date on which it was approved by Her Majesty in Council, viz., 13th August, 1895.

<sup>1</sup> The examination in Agricultural Botany, Agricultural Entomology, and Experimental Physics, may be practical.

TABLE OF EXAMINATIONS FOR DEGREE OF B.S.C. IN AGRICULTURE DURING SESSION 1907-8.

Names to be given in and Fees paid to Assistant-Clerk (Matriculation Office). Date. <sup>2</sup>	Fee.	Subjects of Examination.	Dates of Written Examinations and Hours at which the different Papers will be set. The Oral Examinations in Science follow the Written at dates to be arranged.	March—April, 1908.
12th September, 1907, or 12th March, 1908.	£1 1s. FOR EACH SUBJECT UNTIL 50s. SHALL HAVE BEEN PAID.	Mathematics, -	Fri., 27th Sept., 9-12 noon & 3-6 p.m.	Fri., 27th March, 9-12 noon & 3-6 p.m.
		Geology, -	Sat., 5th Oct., 9-12 noon.	Sat., 28th March, 3-6 p.m.
		Botany, -	Mon., 30th Sept., 9-12 noon.	Mon., 30th March, 9-12 noon.
		Chemistry, -	Do., do., 2-5 p.m.	Do., do., 2-5 p.m.
		Geology, -	Monday, 7th Oct., 2-4 p.m.	Do., do., 6-8 p.m.
		Zoology, -	Tues., 1st Oct., 9-12 noon.	Tues., 31st March, 9-12 noon.
		Engineering, -	Wed., 2nd Oct., 9-11 a.m. & 3-5 p.m.	Wed., 1st April, 9-11 a.m. and 3-5 p.m.
		Economic Science, -	Do., do., 6-9 p.m.	Do., do., 6-9 p.m.
		Natural Philosophy, -	Fri., 4th Oct., 9-12 noon & 2-5 p.m.	Fri., 3rd April, 9-12 noon and 2-5 p.m.
		Agriculture, -	Do., do., 9-12 noon.	Do., do., 9-12 noon.
		Agric. Entomology, -	Do., do., 2-5 p.m.	Do., do., 2-5 p.m.
		Veterinary Hygiene, -	Sat., 5th Oct., 9-12 noon.	Sat., 4th Apr., 9-12 noon.

<sup>1</sup> For Women students, Miss Galloway, Queen Margaret College.

<sup>2</sup> When Names are not given in and Fees are not paid on or before the stated dates, a late Entry Fee of Ten Shillings must be paid before the candidate can be admitted to examination. A candidate is not held to be entered for the examination until his name is entered, the fee paid, and all the necessary certificates, etc., lodged.

For Dates in regard to Science Preliminary Examination see page 218.

**Degrees in Science in Public Health.**

The following are the provisions of Ordinance No. 2 made by the University Court:—

I. Two degrees in Science in Public Health shall be conferred by the University of Glasgow, viz.: Bachelor of Science in Public Health (B.Sc. Pub. Health) and Doctor of Science in Public Health (D.Sc. Pub. Health).

**B.SC. IN PUBLIC HEALTH.**

II. Candidates for the degree of Bachelor of Science in Public Health must be graduates in Medicine of a University of the United Kingdom, or of some other University recognised for the purpose by the University Court of the University of Glasgow.

III. Candidates must be matriculated for the year in which they appear for examination or graduation.

IV. Candidates shall be admitted to the Degree of Bachelor of Science in Public Health, only after they have fulfilled the following conditions, viz.: they must produce evidence

(1) That, after their graduation in Medicine, they have received practical instruction, including instruction in Chemistry, Bacteriology, and the Pathology of the Diseases of Animals transmissible to man, for at least twenty hours per week during a period of not less than eight months, of which at least five consecutive months must be in the Public Health Laboratory of the University of Glasgow, and the remainder in the foresaid Laboratory, or in a Public Health Laboratory recognised for the purpose by the University Court;

(2) That they have attended either before or after graduation in Medicine, such courses on (a) Physics and (b) Geology, either in the University of Glasgow or elsewhere, as would qualify for graduation in Science or Arts in the said University; or have attended in said University or any other Scottish University in addition to the course in Physics qualifying for graduation in Medicine, such further course in Physics as the Senatus Academicus, with the approval of the University Court, shall deem necessary, and such a course in Geology extending over not less than three months, as the Senatus with the like approval shall deem sufficient and appropriate.

(3) That after their graduation in Medicine they have attended two separate courses in Public Health, one course dealing with Medicine and consisting of seventy-five meetings of the class, the other with Engineering and consisting of twenty-five meetings of the class, each in its relation to Public Health, in such manner as the Senatus Academicus, with the approval of the University Court, shall determine.

(4) That after their graduation in Medicine they have for six months,

three of which must be continuous, practically studied sanitary work under the supervision of :

- (a) In England and Wales, the Medical Officer of Health of a County or of a single Sanitary District having a population of not less than 50,000, or a Medical Officer of health devoting his whole time to Public Health work ; or
- (b) In Scotland, a Medical Officer of Health of a County or Counties, or of one or more Sanitary Districts having a population of not less than 30,000 ; or
- (c) In Ireland, a Medical Superintendent Officer of Health of a District or Districts having a population of not less than 30,000 ; or
- (d) A Medical Officer of Health who is also a Teacher in the Department of Public Health of a recognised Medical School.

Half of the above period must be devoted solely to the study of sanitary work as aforesaid ; the other half partly to the same study.

(5) That after their graduation in Medicine they have attended during three months the practice of an Hospital for Infectious Diseases in an Hospital at which opportunities are afforded for the study of Methods of Administration, recognised for the purpose by the University Court ; and

(6) That they have had three months' instruction in Mensuration and Drawing under a teacher recognised for the purpose by the University Court.

V.<sup>1</sup> Each candidate shall be examined both in writing and orally, and also practically where the nature of the subject admits in the following divisions, viz. : *First*, in (a) Public Health Laboratory work, (b) Physics, and (c) Geology, if an examination in Physics or Geology, as the case may be, qualifying for graduation either in Science or Arts has not previously been passed by the Candidate ; *Second*, in (a) Sanitation, including reports on dwellings, workshops, hospitals, and sanitary schemes generally, (b) Sanitary Law, (c) Vital Statistics, and (d) Medicine in its bearings on Public Health, and the examinations in these subjects shall be taken at one time.

VI. Candidates who have passed their examinations in the subjects comprised in the first division shall not be admitted to examination in the second division sooner than eighteen months after having taken their degree in Medicine, nor sooner than six months after having passed the first examination.

VII. The Board of Studies for the Faculty of Science along with the Lecturer or Professor of Public Health shall from time to time, with the approval of the Senatus and the University Court, determine and announce the character of the instruction to be given in the Laboratory, and shall fix the standard of the examinations.

<sup>1</sup> The Senate, with the approval of the University Court, has made, under Ordinance No 13, the following regulation :—A period of not less than twelve months shall have elapsed between the attainment of a registrable qualification in Medicine, Surgery, and Midwifery, and the admission of the candidate to any examination, or any part thereof, for the Degree of B.Sc. in Public Health.



VIII. It shall also be competent for the University Court, after consultation with the Senatus, to modify from time to time the provisions as to the work and instruction hereinbefore specified as necessary for graduating in Science in Public Health, in case such modification shall be rendered desirable by the development of the Science of Public Health, or by increase of the facilities provided in the said University or elsewhere for the study of any branch of the said Science.

IX. The Examiners for graduation in Science for the Degree of B.Sc. in Public Health in the University of Glasgow shall be the Professors in that University whose subjects qualify for graduation in Science, together with such Lecturers in the University, and such additional Examiners to be appointed by the University Court as the University Court shall deem necessary, provided that the Court shall make such provision as will ensure that every candidate shall be examined in each subject by at least two Examiners, of whom one shall not be a Professor or Lecturer in the University. Provided also that the Examination under Section V. in Sanitation, including reports of dwellings, workshops, and hospitals, and sanitary schemes generally, shall be conducted by two Examiners, one of whom shall be a Medical Officer of Health, and the other shall be the Professor of, or Lecturer on, Public Health in the University.

#### D.SC. IN PUBLIC HEALTH.

X. Graduates who have held the degree of Bachelor of Science in Public Health from the University of Glasgow for a term of five years, may offer themselves for the Degree of Doctor of Science in Public Health in the said University.

XI. Each candidate for the degree of Doctor of Science in Public Health shall present a thesis or a published memoir or work to be approved by the Senatus, on the recommendation of the Faculty of Science, and shall also be required to pass an examination in Public Health, and in such of its special departments as the Senatus, with the approval of the University Court, by regulations framed from time to time, shall determine.

The thesis, or published memoir or work, shall be a record of original research undertaken by the candidate, and shall be accompanied by a declaration, signed by him, that the work has been done, and the thesis or memoir composed by himself.<sup>1</sup>

XII. The Senatus Academicus shall appoint such Professors or Lecturers as it may think suitable to conduct the examination of candidates who may offer themselves under the provisions of this Ordinance for the Degree of Doctor of Science, and the University Court shall, after consultation with the Senatus Academicus, appoint such additional Examiners as they deem necessary to act along with them. Such additional Examiners shall be persons of recognised eminence in the subject of the thesis, or memoir, or work which is to be submitted for approval, and may be Professors or Lecturers in any Scottish University other than the University of Glasgow.

<sup>1</sup> See second note on page 248.

XIII. The thesis, memoir, or work submitted by a candidate for the Degree of Doctor of Science shall in each case be examined by the additional Examiner to be appointed by the University Court, as well as by the Examiners to be appointed by the Senatus under the provisions of Section XII. of this Ordinance.

XIV. The result of the examination of the thesis, memoir, or work submitted by a candidate, as well as the result of the Examination prescribed under Section XI. of this Ordinance, shall be reported to the Faculty of Science.

#### GENERAL.

XV. Candidates who produce certificates bearing that, either before or after, or partly before and partly after, the date at which this Ordinance shall come into force, they have satisfied the conditions prescribed by this Ordinance, and who have passed the necessary examinations, shall be entitled to receive the degrees of Bachelor of Science in Public Health and Doctor of Science in Public Health, as the case may be, on payment of the fees required.

XVI. The degrees of Bachelor and Doctor of Science in Public Health shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum*.

XVII. This Ordinance shall come into force from and after the date on which it is approved by His Majesty in Council.

Approved, 20th May, 1903.

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ROBERT W. ROBERTSON BURSARY (*Law*).—Founded by the late Robert William Robertson of Glenshellish, who bequeathed to the University a sum of £1000 sterling for that purpose. The following are the regulations:

1. The Scholarship shall be awarded by the Senate annually in the month of April (except as hereinafter provided) to the Graduate in Law who, having taken the Degree of LL.B. at the autumn or spring Graduation immediately preceding the date of award, has obtained the highest aggregate of marks in the Degree Examinations.

2. No graduate shall be disqualified by his having obtained another Scholarship or Bursary or Prize in the Faculty of Law.

3. In cases of equality in the aggregate of marks, graduates bearing the name of Robertson shall have a preference, and failing this preference the Scholarship shall be divided.

4. If in any year the Faculty of Law report to the Senate that no graduate has attained a sufficiently high standard of merit, the Scholarship shall not be awarded, and the amount of the Scholarship for that year shall be added to the Capital fund.

TABLE OF EXAMINATIONS FOR DEGREE OF B.Sc. IN PUBLIC HEALTH DURING SESSION 1907-8.

Names to be given in and Fees paid to Assistant-Clerk 1 (Matriculation Office) Date. 2	FEE.	Subjects of Examination.	Dates of Written Examinations and Hours at which the different Papers will be set. The Oral Examinations in Science follow the Written at dates to be arranged.	
			October, 1907.	March-April, 1908.
12th September, 1907, or 12th March, 1908.	£1 18. FOR EACH SUBJECT UNTIL 50 HS. £1 18. SHALL HAVE BEEN PAID.	Geology, - - - -	Sat., 5th Oct., 9-12 noon.	Sat., 28th March, 3-6 p.m.
		Do., - - - -	Mon., 7th Oct., 2-4 p.m.	Mon., 30th March, 6-8 p.m.
		Public Health Laboratory,	Tues., 1st Oct., 9-1 p.m.	Tues., 31st March, 9-4 p.m.
		Do., do.,	Wed., 2nd Oct., 9-12 noon.	Wed., 1st April, 9-12 noon.
		Vital Statistics, - -	Do., do., 9-11 a.m.	Do., do., 9-11 a.m.
		Sanitary Law, - -	Do., do., 12-2 p.m.	Do., do., 12-2 p.m.
		Medicine in relation to Public Health, - -	Thurs., 3rd Oct., 9-11 a.m.	Thurs., 2nd April, 9-11 a.m.
		Practical Sanitation, -	Do., do., 2-4 p.m.	Do., do., 2-4 p.m.

<sup>1</sup> For Women students, Miss Galloway, Queen Margaret College.

<sup>2</sup> When Names are not given in and Fees are not paid on or before the stated dates, a late Entry Fee of Ten Shillings must be paid before the candidate can be admitted to examination. A candidate is not held to be entered for the examination until his name is entered, the fee paid, and all the necessary certificates, etc., lodged.

## DEGREE IN SCIENCE IN PHARMACY.

The following are the provisions of the University Court Ordinance No. XVI. (Glasgow No. 4), issued on 3rd May, 1906, and approved by His Majesty in Council on 11th February, 1907 :—

I. A Degree of Bachelor of Science in Pharmacy (B.Sc. Pharm.) may be conferred by the University of Glasgow.

II. Every candidate for the Degree of Bachelor of Science in Pharmacy must pass the Preliminary Examination prescribed by Ordinance No. 11 [General, No. 6—Regulations for Degrees in Arts], and the conditions with respect thereto imposed by the said Ordinance shall be applicable in all respects to Candidates for the Degree of Bachelor of Science in Pharmacy, except as follows :—(1) French or German may be substituted for Latin or Greek ; (2) Mathematics shall be passed on the higher standard ; (3) a degree in Arts (not being a degree *honoris causâ tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University specially recognised for the purpose by the University Court after consultation with the Senatus Academicus, shall exempt from the Preliminary Examination.

III. Candidates for the Degree of Bachelor of Science in Pharmacy must, in the course of not less than three Academical years, within the meaning of the Ordinance last above mentioned, attend at least seven courses of instruction in subjects prescribed for examination under Sections X. and XI. of this Ordinance, and must have been practically engaged in the operations of Pharmacy, and have fulfilled the other conditions thereanent, as prescribed in Section XI. of this Ordinance.

IV. Three of the courses mentioned in Section III. must be in subjects prescribed for the first Science Examination under Section X. of this Ordinance, and four must be in subjects prescribed for the final Science Examination under Section XI. of this Ordinance.

V. (1) Four of the seven courses must be taken in the University of Glasgow.

(2) Three may be taken in other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science ; provided that the fees for attendance at an approved Institution or under a recognised teacher in Glasgow shall not be less than the fees exigible for the corresponding courses in the University.

VI. All Candidates, not matriculated students of the University, availing themselves of the permission to attend lectures at approved Institutions, or by recognised teachers in Glasgow, shall at the commencement of each year of such attendance, enrol their names in a book to be kept for that purpose in the University, paying a fee of the same amount as the Matriculation Fee paid by students of the University, and having, in respect of such payment, a right to the use of the Library of the University.

VII. (1) After receiving through the Faculty of Science the opinion of the Board of Studies, the Senatus shall determine from time to time the number of meetings of which a full course in any subject shall consist, and shall report its determination to the University Court for its approval.

(2) After receiving through the Faculty of Science the opinion of the Board of Studies, the Senatus, with the approval of the University Court, may sanction half courses of not less than half the number of meetings that constitute a full course in the subject; and two half courses shall be held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) It shall be the duty of each Professor and Lecturer annually at the end of each Winter Session, to submit to the Board of Studies a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Board of Studies shall transmit the schemes to the Faculty of Science, who shall submit them to the Senatus with such observations as they may think fit to make thereon. The Senatus shall transmit such schemes, with such observations as it may think fit to make thereon, to the University Court for its approval.

(4) It shall be the duty of each Professor and Lecturer annually at the end of each Winter Session to submit to the Board of Studies for its approval a syllabus of the subjects and books proposed for the work of his class or classes during the next Academical year. Upon such approval being given the syllabus shall be transmitted to the Faculty of Science for its consideration. The syllabus, with such observations as the Faculty of Science may think fit to make thereon, shall then be transmitted to the Senatus for its sanction.

VIII. The provisions of the preceding section shall not apply to approved Institutions or recognised Teachers outside Glasgow; but the University Court shall not grant or continue recognition to any Institutions or Teachers unless they shall be satisfied that their courses of instruction are equivalent to the courses sanctioned in the Universities of Scotland.

IX. Candidates must be matriculated students of the University of Glasgow when they appear for examination or graduation.

X. (1) There shall be a First Science Examination in the three following subjects, viz.:—(1) Mathematics or Biology (*i.e.*, Zoology and Botany); (2) Natural Philosophy; (3) Chemistry.

(2) The Examination in all these subjects shall be the same as the Examination in these subjects for the first Bachelor of Science Examination in Pure Science with the addition of practical work in the subjects which admit of it.

(3) Candidates may present themselves in any one or more of these subjects at any Examination held after they have attended the required course in the subject or subjects professed.

XI. (1) There shall be a Final Science Examination on a higher standard on the following subjects:—

1. Chemistry.
2. Botany.
3. Materia Medica.
4. Pharmacy.

(2) Candidates presenting themselves for this Examination must (a) have passed in all the subjects comprised in their First Science Examination; (b) have attended a full course of higher instruction, including practical or laboratory work, in each of the four subjects; and (c) already be Chemists and Druggists registered under the Pharmacy Acts, 1852 and 1868, or be Graduates in Medicine of a University of the United Kingdom, or of some other University recognised for the purpose by the University Court of the University of Glasgow.

XII. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint, and in every case the Senatus shall make a report to the University Court setting forth the reasons for the relaxation.

XIII. A candidate for the Degree of Bachelor of Science in Pharmacy shall not be deemed (1) to have attended a class as part of the curriculum for that Degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class; (2) to have fulfilled the conditions respecting the practice of Pharmacy who does not present a certificate or diploma showing that he possesses either of the qualifications required under Section XI. (2) c of this Ordinance.

XIV. It shall be competent to the Examiners for the Degree of Bachelor of Science in Pharmacy to report that a candidate has passed with special distinction in one or more of the subjects professed by him; and in such a case a diploma shall be given setting forth the subjects in respect of which the Degree has been granted, and the subject or subjects in which special distinction has been obtained.

XV. The Examiners for the Degree of Bachelor of Science in Pharmacy in the University of Glasgow shall be the Professors in that University whose subjects qualify for the Degree, together with such Lecturers in the University and such additional Examiners to be appointed by the University Court as the University Court shall deem necessary, provided that the Court shall make such provisions, as will ensure that every candidate shall be examined in each subject by at least two examiners, of whom one shall not be a Professor or Lecturer in the University.

XVI. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, shall be entitled to receive the Degree of Bachelor of Science in Pharmacy on payment of the fees required.

XVII. The Degree of Bachelor of Science in Pharmacy shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum*.

XVIII. For the purposes of this Ordinance the Professor of Materia Medica shall be deemed to be a Member of the Faculty of Science.

XIX. This Ordinance shall come into force at the beginning of the Winter or Summer Session next after the date of its approval by His Majesty in Council.

#### DIPLOMA IN EDUCATION.

The following regulations drawn up by the Senate were approved by the University Court on 26th April, 1900 :

1. Candidates for the Diploma in Education must be graduates<sup>1</sup> in Arts or Science of a University in the United Kingdom, or of some other University recognised for this purpose by the University Court.

2. The diploma is of two grades : (a) General Diploma, and (b) Diploma with Distinction.

3. The general diploma is open to any graduate in Arts or Science who fulfils the following requirements :

- (a) In addition to the curriculum for his Degree he must give attendance on a full course and pass the Degree examination on the same, subject to the condition that the regulations applicable to this additional course as a Degree course shall be fulfilled. This additional course may be taken at any time either before or after graduation.
- (b) The Education course must in every case either constitute part of his Degree curriculum, or be the additional course prescribed in the preceding subsection.
- (c) He must produce evidence either (1) that he has attended a course of Practical Instruction as a King's Student under the Local Committee for the Training of Teachers or as a King's Scholar in a Training College for Teachers, or (2) that he has gone through a course of Practical Training under the Local Committee or in a Training College for Teachers—the course to extend over five months (not less than eight hours weekly), and to include instruction in School management, Practice in teaching, and a series of Model and Criticism Lessons.<sup>2</sup>
- (d) He must pass a Written examination, conducted by the University, in School Management and Organisation and Methodology, and give proof of his practical skill by conducting a class to the satisfaction of an Examiner or Examiners appointed by the University.

<sup>1</sup> Women who have been placed in the Class-lists of one or other of the Final Honours Examinations in the University of Oxford or the University of Cambridge shall be deemed to be graduates for the purpose of these regulations.

<sup>2</sup> Acting Teachers who produce their Parchment Certificates, or who produce evidence of having taught with success in Secondary Schools for two years, shall be held to have complied with this regulation, and may on fulfilling the other requirements, receive the Diploma.

N.B.—*The general Diploma is recognized by the Scotch Education Department as qualifying (in the case of graduates of the University of Glasgow) for employment in Public Schools. Graduates of this University who obtain the Diploma and desire recognition as Certificated Teachers must satisfy the Department of their physical capacity, and must produce satisfactory evidence as to age in the manner prescribed by the rules made under section 6 of the Elementary School Teachers (Superannuation) Act, 1898. Early application should be made to the Department for such recognition if it is desired.*

4. The Diploma with Distinction is open to any holder of an ordinary degree in Arts, any graduate in Arts with Honours, or any graduate in Science, who fulfils the requirements of the preceding regulation, and in addition passes an examination on the method of teaching one or more of the following groups of subjects as taught in Secondary Schools, viz. (a) Classics; (b) Mathematics; (c) Science; (d) English, including History; (e) French and German: Provided always that the holder of an ordinary Degree in Arts before being admitted to the examination on the method of teaching shall be required to pass an examination equivalent to an Honours or to a Final Science examination in the group or groups of subjects selected by him.

5. The Fee for the Diploma is Two Guineas.

Examinations for the Diploma will be held on Friday, 15th November, 1907, from 9 a.m. to 12 noon, and from 2 p.m. to 5 p.m.; and on Friday, 1st May, 1908, from 9 a.m. to 12 noon, and from 2 p.m. to 5 p.m. Candidates for the General Diploma take the forenoon paper only. Name of candidates to be given in to the Assistant-Clerk, Matriculation Office, on 4th November, 1907, or on 17th April, 1908.

### 3.—HIGHER DEGREES IN ARTS AND SCIENCE.

In Ordinance No. 62, issued on 15th February, 1895, and approved by Her Majesty in Council on 29th June, 1895, the Universities Commission made the following regulations for Higher Degrees in Arts and Science :—

#### DEGREE OF D.SC.

I. Graduates who have taken the degree of Master of Arts in any Scottish University with first or second class honours in Mathematics and Natural Philosophy under the conditions prescribed by Ordinance No. 11 (Regulations for degrees in Arts), or under the regulations previously in force in such University, may offer themselves for the degree of Doctor of Science (D.Sc.) in the same University after the expiry of five years from the date of their graduation in Arts, under the same conditions as if they held the degree of Bachelor of Science.

II. Research Students within the meaning of Ordinance No. 61 (Regulations for the Encouragement of Special Study and Research and for the appointment of Research Fellows) may offer themselves for the degree of Doctor of Science of the University in which they have prosecuted some special study or research under that ordinance, although



they have not taken the degree of Bachelor of Science or the degree of Master of Arts with Honours as aforesaid, in that University: Provided—

- (1) That they hold the degree of Bachelor of Science or Bachelor of Medicine of a Scottish or any recognized University, or a degree of any such University, which the Senatus Academicus shall hold to be equivalent to the degree of Bachelor of Science or to the degree of Master of Arts with first or second class honours in Mathematics and Natural Philosophy: Provided that candidates who hold any such degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students with a view to the degree of Doctor of Science, to pass an examination equivalent to an Honours or to a Final Science Examination in a group of subjects cognate to their line of work as Research Students.
- (2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and that they produce evidence of satisfactory progress in the special study or research undertaken by them during that period.
- (3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

III. All candidates for the degree of Doctor of Science shall present a thesis or a published memoir or work,<sup>1</sup> to be approved by the Senatus on the recommendation of the Faculty of Science<sup>2</sup>: Provided that, if required by the Senatus, the candidate shall also be bound to pass such an examination conducted orally or practically, or by written papers, or by all of these methods, on the subjects of his special study or of his thesis, as may from time to time be determined. The thesis shall be a record of original research undertaken by the candidate, and shall be accompanied by a declaration signed by him that the work has been done and the thesis composed by himself.<sup>3</sup>

#### DEGREE OF D. PHIL.

IV. Graduates who have taken the degree of Master of Arts in any Scottish University with first or second class honours in Mental Philosophy, under the conditions prescribed by Ordinance No. 11 (Regulations for Degrees in Arts), or under the regulations previously in force in such University, may offer themselves for the degree of Doctor of Philosophy (D.Phil.) in the same University after the expiry of five years from the date of such graduation.

<sup>1</sup> The Thesis must be lodged and the fees paid on or before 11th January.

<sup>2</sup> Ordinance No. 167, which was issued by the Universities Commission on 24th June, 1897, and which was approved by Her Majesty in Council on 19th May, 1898, requires that the thesis, memoir, or work shall in each case be examined by the additional examiner to be appointed by the University Court under Ordinance No. 62, Section X., as well as by the examiner or examiners to be appointed by the Senatus under Ordinance No. 62, Section IX. (*sic*).

<sup>3</sup> See second note on page 248.

V. Research Students as aforesaid may offer themselves for the degree of Doctor of Philosophy of the University in which they have prosecuted some special study under Ordinance No. 61 (Regulations for the Encouragement of Special Study and Research, and for the appointment of Research Fellows), although they have not taken the degree of Master of Arts with Honours as aforesaid in that University: Provided—

- (1) That they hold the degree of Master of Arts with first or second class honours in Mental Philosophy of any Scottish University, or a degree of any recognised University, which the Senatus Academicus shall hold to be equivalent to such degree with honours as aforesaid: Provided that candidates who hold such a degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students, with a view to the degree of Doctor of Philosophy, to pass an examination equivalent to an honours examination in a group of subjects cognate to their line of work as Research Students.
- (2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and produce evidence of satisfactory progress in the special study undertaken by them during that period.
- (3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section(1) of this section.

VI. All candidates for the degree of Doctor of Philosophy shall present a thesis or a published memoir or work,<sup>1</sup> which shall be an original contribution to learning, to be approved by the Senatus Academicus on the recommendation of a Committee appointed by the Senatus:<sup>2</sup> Provided that, if required by the Senatus, a candidate shall also be bound to pass such examination, conducted orally or otherwise, on the subject of his thesis or of his special study as may from time to time be determined. The thesis, or memoir, or work shall be accompanied by a declaration signed by the candidate that it has been composed by himself. If the thesis has not already been published, it shall be published by the candidate in such manner as the Senatus shall approve.

#### DEGREE OF D.LITT.

VII. Graduates who have taken the degree of Master of Arts in any Scottish University with first or second class honours in any group other than Mathematics and Natural Philosophy or Mental Philosophy, under the conditions prescribed by Ordinance No. 11 (Regulations for Degrees in Arts), or under the regulations previously in force in such University, may offer themselves for the degree of Doctor of Letters

<sup>1</sup> See first footnote on p. 275.

<sup>2</sup> Ordinance No. 167, which was issued by the Universities Commission on 24th June, 1897, and which was approved by Her Majesty in Council on 19th May, 1898, requires that the thesis, memoir, or work shall in each case be examined by the additional examiner to be appointed by the University Court under Ordinance No. 62, Section X., as well as by the examiner or examiners to be appointed by the Senatus under Ordinance No. 62, Section IX. (*sic*).

(D.Litt.) in the same University after the expiry of five years from the date of such graduation.

VIII. Research Students as aforesaid may offer themselves for the degree of Doctor of Letters of the University in which they have prosecuted some special study under Ordinance No. 61 (Regulations for the Encouragement of Special Study and Research, and for the appointment of Research Fellows), although they have not taken the degree of Master of Arts with Honours as aforesaid in that University: Provided—

- (1) That they hold the degree of Master of Arts with first or second class honours in any group except Mathematics and Natural Philosophy or Mental Philosophy of any Scottish University, or a degree of any recognised University, which the Senatus Academicus shall hold to be equivalent to such degree with honours as aforesaid: Provided that candidates who hold such a degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students with a view to the degree of Doctor of Letters, to pass an examination equivalent to an honours examination in a group of subjects cognate to their line of work as Research Students.
- (2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and produce evidence of satisfactory progress in the special study undertaken by them during that period.
- (3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

IX. All candidates for the degree of Doctor of Letters shall present a thesis or a published memoir or work,<sup>1</sup> which shall be an original contribution to learning, to be approved by the Senatus Academicus on the recommendation of a Committee appointed by the Senatus<sup>2</sup>: Provided that, if required by the Senatus, a candidate shall also be bound to pass such examination, conducted orally or otherwise, on the subject of his thesis or of his special study as may from time to time be determined. The thesis, or memoir, or work shall be accompanied by a declaration signed by the candidate that it has been composed by himself. If the thesis has not already been published, it shall be published by the candidate in such manner as the Senatus shall approve.

#### GENERAL.

X. The Senatus Academicus in each University shall appoint such Professors or Lecturers as it may think suitable to conduct the examination of candidates who may offer themselves under the provisions

<sup>1</sup> See first footnote on p. 275.

<sup>2</sup> Ordinance No. 167, which was issued by the Universities Commission on 24th June, 1897, and which was approved by Her Majesty in Council on 19th May, 1898, requires that the thesis, memoir, or work shall in each case be examined by the additional examiner to be appointed by the University Court under Ordinance No. 62, Section X., as well as by the examiner or examiners to be appointed by the Senatus under Ordinance No. 62, Section IX. (*sic*)

either of Ordinance No. 12 (Regulations for Degrees in Science) or of this ordinance, for the degree of Doctor of Science, Doctor of Philosophy, or Doctor of Letters; and the University Court shall, after consultation with the Senatus Academicus, appoint an additional Examiner to act along with them.<sup>1</sup> Such additional Examiner shall be a person of recognised eminence in the subject of the thesis, or memoir, or work which is to be submitted for approval. The result of the examination shall be reported to the appropriate Faculty or Committee of Senatus.

XI. The Degrees of Doctor of Science in Mental Science or Doctor of Science in Philology shall no longer be conferred by any Scottish University.

XII. Candidates who have already completed the necessary attendance on classes required for the degree of Doctor of Science in Mental Science or Doctor of Science in Philology, under regulations hitherto in force in any Scottish University, may proceed to the degree of Doctor of Philosophy, or of Doctor of Letters, as the case may be, under this ordinance: Provided such candidates comply with the provisions of Section VI. or Section IX. hereof, as the case may be, and that a period of not less than five years shall have elapsed from the date of their graduation as Masters of Arts.

XIII. The degrees of Doctor of Science, Doctor of Philosophy, and Doctor of Letters shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

XIV. The fee to be paid for the degree of Doctor of Philosophy shall be ten guineas.

XV. The fee to be paid for the degree of Doctor of Letters shall be ten guineas.

#### 4.—GRADUATION IN MEDICINE AND SURGERY.

The Degrees in Medicine and Surgery conferred by this University are all recognised by the Medical Acts as qualifying for practice throughout the British dominions, and for admission to the Army, Navy, and Public Medical Service.

Every student who began medical studies previous to 1st January, 1892, is entitled to graduate under the system in force before or after that date, according as he shall comply with the regulations in force in the University before<sup>2</sup> or after that date.

<sup>1</sup>Ordinance No. 167, which was issued by the Universities Commission on 24th June, 1897, and which was approved by Her Majesty in Council on 19th May, 1898, empowers the University Court to appoint, as additional examiners under this section, persons who are Professors or Lecturers in any Scottish University other than the University granting the degree.

<sup>2</sup>These regulations may be found at pp. 188—192 of the *University Calendar* for session 1895-96, and in the *Calendars* for preceding sessions.

All others must fulfil the requirements of the new ordinance—(Ordinance No. 14, Glasgow No. 1—Regulations for Degrees in Medicine)—the principal provisions of which are as follows :—

I. Four degrees in Medicine and Surgery are conferred by the University of Glasgow, viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The Degree of Bachelor of Surgery shall not be conferred on any person who does not at the same time obtain the Degree of Bachelor of Medicine, and the Degree of Bachelor of Medicine shall not be conferred on any person who does not at the same time obtain the Degree of Bachelor of Surgery.

II. Subject to regulations to be made from time to time by the University Court, the University may also confer diplomas in Special Branches of Medical and Surgical Practice on graduates of the University in Medicine and Surgery.

III. Before commencing his medical studies, each student shall pass a Preliminary Examination in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek or French or German: Provided always that, in the case of a candidate whose native language is not English, an examination in the native language of the candidate may be substituted for one in either French or German, and an examination in any other classical language for one in Latin or Greek.<sup>1</sup>

IV. The extent and standard of the Preliminary Examination shall be determined by the Joint-Board of Examiners constituted under Ordinance No. 13 (Regulations as to Examinations) in accordance with the terms of that ordinance.

Under this section the Joint-Board have directed that for the Medical Preliminary Examination the papers set in Latin, Greek, and Mathematics shall be the same as those set on the lower standard in these subjects in the Arts and Science Preliminary Examination.<sup>2</sup>

In English, no set books shall be prescribed, nor shall a general knowledge of the life and works of the greater authors be expected of candidates, but one or two questions may be set, giving an opportunity to candidates to show a knowledge of famous literary works. The historical questions shall not be confined to any one period, but shall cover the whole of British History, and shall be set in such a way as to give an opportunity to candidates who have confined their studies to a single period to show their knowledge. A single three hours' paper shall be set, containing an Essay, a Paraphrase, two questions on History, two on Geography, four on Grammar (including correction

<sup>1</sup> The candidate for the Degrees of Bachelor of Medicine and Bachelor of Surgery must have been registered in the books of the General Medical Council at least five years prior to the date of his graduation. In order to be so registered he must transmit to James Robertson, Esq., the Scottish Branch Registrar, 54 George Square, Edinburgh, together with a printed form of application, which may be obtained from the Assistant Clerk (Matriculation Office, University), a certificate of having passed the Preliminary Examination, and satisfactory evidence of the applicant having attained the age of sixteen years.

<sup>2</sup> For details see p. 215.

of sentences, parsing, analysis of sentences, and derivations), two of a literary and general kind. Eight answers shall be required. The Essay, the Paraphrase, one answer on History and one on Geography shall be compulsory.

One paper shall be set in French and one in German. The papers shall be of a lower standard than those set in these subjects in the Arts and Science Preliminary Examination. The time allowed for each of these papers shall be three hours. The paper in each subject shall comprise questions in Grammar, translation into English, a piece of English, and some short sentences in English of an idiomatic character, for translation.

It shall be in the option of any candidate for the Medical Preliminary to take the papers set on the higher standard for the Arts Preliminary in any of the subjects.

Candidates who, having taken English, Latin, Greek, or a Modern Language, on the higher standard, as prescribed by the Arts Ordinance for the Arts and Science Preliminary, have obtained a satisfactory percentage of marks, shall be held to have passed the Medical Preliminary in these subjects; and on the higher Mathematics paper, an intermediate pass in Mathematics is granted: Provided that all the required subjects are passed at no more than two examinations.

It shall be at the Board's discretion at all times in the case of any candidate for the Medical Preliminary who professes all his four subjects at one time, and who has obtained in all a number of marks equivalent to the sum of the marks required for a pass in each, to allow such candidate a pass in the whole examination, provided that in no single subject he has obtained less than half of the marks required for a pass, and that the pass-mark be reached in the English paper.

V. The Preliminary Examination shall be conducted in accordance with the provisions of Ordinance No. 13 (Regulations as to Examinations), and, subject to the provisions of the immediately succeeding section hereof, *a candidate shall be obliged to pass in all the required subjects at one or not more than two examinations; Provided that he may offer himself for re-examination as often as may be necessary to satisfy this condition.*<sup>1</sup>

VI. A degree in Arts or in Science (not being a degree *honoris causa tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University specially recognised for the purpose by the University Court, shall exempt from the Preliminary Examination; and the Joint-Board of Examiners appointed under the provisions of Ordinance No. 13 (Regulations as to Examinations) shall have power to determine what examinations, other than those for the degrees hereinafore mentioned, shall be accepted, either in whole or in part, in place of the Preliminary Examination.<sup>2</sup>

<sup>1</sup> The words in *italics* are taken from Ordinance No. 156, Section I.

<sup>2</sup> Applications for exemption on the ground of having passed examinations not included in the following list, should be addressed to the Convener of the Board. As several Universities have to be consulted, a decision on a new case cannot be guaranteed in less time than from two to three weeks.

The Joint-Board have issued the following rules under the heading:—  
**Examinations accepted as exempting from the Preliminary Examination in Medicine:** *Provided always that the regulations of the General Medical Council regarding the registration of students of Medicine be complied with:—*

1. In terms of the Medical Ordinances, “a degree in Arts or in Science (not being a degree *honoris causa tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University Court, shall exempt from the Preliminary Examination.”

2. Any candidate who produces a certificate of having passed the Preliminary Examination in Arts or Science in any Scottish University, either at the University Examination or through the Leaving Certificate Examinations of the Scotch Education Department, or partly at the University Examination and partly through the Leaving Certificate Examinations, shall be held to have passed the Preliminary Examination for Medicine: *Provided* that the examination has included the specified subjects of General Education as required under the Regulations of the General Medical Council, and by Section III. of this ordinance.

3. A candidate who has passed the Arts and Science Preliminary Examination of the Joint-Board in any subject (Higher Standard where there is more than one) recognised for the Medical Preliminary Examination, shall be exempted from further examination in that subject in the aforesaid Preliminary Examination.

4. A candidate who has passed in the Honours or Higher Grade in any subject of the Leaving Certificate Examinations of the Scotch Education Department recognised for the Medical Preliminary Examination shall be exempted from further examination in that subject in the aforesaid Preliminary Examination.

The regulation that all the subjects of the examination shall be passed at one or not more than two examinations shall not be held to apply to the above cases, 2, 3, and 4. But candidates complying with Rules 2, 3, and 4 must obtain a University Certificate specifying the examinations passed by them which have been accepted as equivalents to the Preliminary, and must present said certificate to the Medical Registrar in order to registration.

Further, each such candidate when applying for said certificate must, if he has not entered for any part of the Preliminary, produce a Matriculation Card from some one of the Scottish Universities.

5. Passes in the lower Grade of the Leaving Certificate Examinations of the Scotch Education Department will not be accepted as exempting from the Medical Preliminary Examination unless the examinations in all the requisite subjects have been taken and passed at one or not more than two examinations.

6. The following English and Irish University Examinations will be accepted<sup>1</sup> (provided they include all the subjects required under

<sup>1</sup> The italicised words in Section V., page 280, shall be held to apply to the acceptance of these Examinations.

the regulations of the General Medical Council, and prescribed by Section III. of this ordinance), viz.:—

OXFORD Responsions, or Moderations—provided the candidate pass the examination of the Joint-Board in English.

CAMBRIDGE Previous Examination—provided that candidates who have passed it prior to Michaelmas, 1896, shall pass the examination of the Joint-Board in English. If passed after Michaelmas, 1896, the Previous Examination will be accepted as exempting *in toto*.

OXFORD AND CAMBRIDGE SCHOOLS EXAMINATION BOARD.—The Passes in Latin, Greek, and Mathematics specified on p. 219, as exempting from the Lower Standard in Arts and Science will exempt also for the Medical Preliminary in these subjects. The Pass in French or German for the Lower Certificate or for the 'Leaving Certificate' will be accepted for a Pass in the Medical Preliminary in French or German. For English, the Board will accept (1) The 'Leaving Certificate' in English, with History or Geography; (2) The Lower Certificate in English, History, and Geography.

OXFORD Senior Local Examination will be accepted *pro tanto*, in subjects other than English; in English, if only a pass is offered, the three divisions, Essay, Grammar, and Literature will be expected, or equivalents thereto.

OXFORD Higher Local Examination will be accepted *pro tanto*.

CAMBRIDGE Senior Local Examinations will be accepted *pro tanto*.

CAMBRIDGE Higher Local Examinations will be accepted *pro tanto*.

LONDON UNIVERSITY Matriculation Examination.

DUBLIN, TRINITY COLLEGE.—Public Entrance Examination.

ROYAL UNIVERSITY OF IRELAND.—Applicants for exemption should state their cases to the Convener of the Joint Board.

UNIVERSITIES OF MANCHESTER, LIVERPOOL, LEEDS, AND SHEFFIELD.—Joint Matriculation Examination (the whole examination must be passed, as required for admission to the Faculties of these Universities).

By *pro tanto* is here meant that a certificate of having passed in the examination referred to, in any subject required for the Medical Preliminary Examination, shall, as regards that subject, exempt from further examination in the said Preliminary Examination, provided that all the required subjects shall be passed at one or not more than two examinations.

7. The examinations of the following Indian, Colonial, and Foreign Universities and Colleges will be accepted<sup>1</sup> (provided the examinations include all the subjects required by the General Medical Council and prescribed by the Medical Ordinances of the Scottish Universities' Commissioners, see p. 279, Section III.), viz.:—

<sup>1</sup> See note on p. 281.



UNIVERSITIES OF INDIA (Calcutta, Madras, Bombay, Allahabad, Punjab).—Intermediate (First Arts) Examination. THE CAPE OF GOOD HOPE.—Matriculation Examination. TASMANIA.—Matriculation Examination. NEW ZEALAND.—Medical Preliminary Examination. MELBOURNE.—Matriculation Examination. SYDNEY.—Matriculation Examination. ADELAIDE.—Matriculation Examination, or its substitute, the Senior Public Examination. TORONTO.—Senior or Junior Matriculation Examination.

THE PROVINCIAL EDUCATION DEPARTMENT OF ONTARIO.—Departmental Pass Arts Matriculation Examination.

TRINITY UNIVERSITY, TORONTO.—Matriculation Examination.

QUEEN'S COLLEGE AND UNIVERSITY, KINGSTON.—Matriculation Examination.

M'GILL UNIVERSITY.—Matriculation Examination.

KING'S COLLEGE, WINDSOR, NOVA SCOTIA.—Responsions.

DALHOUSIE COLLEGE, HALIFAX.—Matriculation Examination.

MOUNT ALLISON COLLEGE, SACKVILLE, NEW BRUNSWICK.—Matriculation Examination.

THE UNIVERSITY OF WINNIPEG.—Preliminary Examination in Arts.

VICTORIA COLLEGE, UPPER CANADA.—Matriculation Examination.

THE UNIVERSITY OF HALIFAX, NOVA SCOTIA.—Matriculation Examination.

THE UNIVERSITY OF FREDERICTON, NEW BRUNSWICK.—Matriculation Examination.

THE WESTERN UNIVERSITY OF ONTARIO.—Matriculation Examination.

THE UNIVERSITY OF MANITOBA.—Previous Examination.

CODRINGTON COLLEGE (BARBADOS).—English Certificate for Students of two years' standing, and Latin Certificate, or "Testamur."

TRANSVAAL TECHNICAL INSTITUTE.—Matriculation Examination (if passed as a whole, as required for admission to the Institute).

CONTINENTAL COUNTRIES.—German Abiturienten-Examen, and corresponding Entrance Examinations to the Universities of other countries.

[Students would do well to ascertain at the Matriculation Office whether their Preliminary Examination is complete before beginning their medical studies.]

## PROFESSIONAL EDUCATION.<sup>2</sup>

VII. Candidates shall be admitted to the Degree of Bachelor of Medicine and Bachelor of Surgery only after they have fulfilled the following conditions:—

1. The candidate must have been engaged in medical study for at least five years.

<sup>2</sup> For Order of Study recommended, see p. 107.

2. In each of the first four years the candidate must have attended at least two courses of instruction, in one or more of the subjects of study specified in Sub-section 4 hereof—each course extending over a session of not less than five months, either continuous or divided into two terms : or, alternatively, one such course, along with two courses, each extending over a session of not less than two and a half months.
3. During the fifth or final year the candidate shall be engaged in clinical study for at least nine months at one or more of such public hospitals or dispensaries, British or Foreign, as may be recognised for the purpose by the University Court.
4. The candidate must, during his curriculum, have attended a course or courses of instruction in each of the following subjects of study, including such examinations as may be prescribed in the various classes, viz. :—
 

1. ANATOMY, - - - - -	{	During a course of not less than five months.	
2. PRACTICAL ANATOMY, - - - - -		During two courses of not less than five months each.	
3. CHEMISTRY, - - - - -	{		
4. MATERIA MEDICA and THERAPEUTICS, - - -			
5. PHYSIOLOGY or INSTITUTES OF MEDICINE, - - -			
6. PRACTICE OF MEDICINE, - - - - -			
7. SURGERY, - - - - -			
8. MIDWIFERY and the DISEASES peculiar to WOMEN and INFANTS. Two courses of Midwifery, of three months each, provided different departments of Obstetric Medicine be taught in each of the courses, shall be reckoned equivalent to a course of not less than five months, - - - - -	{	During courses of not less than five months	
9. PATHOLOGY, - - - - -			
10. PRACTICAL CHEMISTRY, - - - - -	{		
11. PHYSICS (including the DYNAMICS OF SOLIDS, LIQUIDS, and GASES, and the rudiments OF SOUND, HEAT, LIGHT, and ELECTRICITY).			
12. ELEMENTARY BOTANY, - - - - -		{	During courses of not less than two and a half months.
13. ELEMENTARY ZOOLOGY, - - - - -			
14. PRACTICAL PHYSIOLOGY, - - - - -			
15. PRACTICAL PATHOLOGY, - - - - -			
16. MEDICAL JURISPRUDENCE and PUBLIC HEALTH,			

Provided always, in so far as regards the University of Glasgow, that—

(a) It shall be the duty of the Senatus to determine from time to time [after receiving through the Faculty of Medicine the opinion of the Board of Studies] the number of meetings of which such courses shall consist, and in what cases two half courses shall be deemed equivalent to a full course ; and to report the determination to the University Court for its approval.<sup>1</sup>

(b) It shall be the duty of the Professors and Lecturers to submit to the Senatus [after 1st October, 1894, the Board of Studies] annually at the end of the winter session a scheme specifying what propor-

<sup>1</sup>The Universities Commission, on 18th November, 1893, ordained that for the better carrying out of the purposes of these provisos the Senate should institute a Board or Boards of Studies in the Faculty of Medicine. See Section I., Ordinance No. 42, which received the approval of Her Majesty in Council on 28th May, 1894. The provisions of this supplementary ordinance have, in the text, been combined with the provisions of the original ordinance, by means of square brackets.

tion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. [The Board of Studies shall transmit the schemes to the Faculty of Medicine, who shall submit them to the Senate with such observations as they may think fit to make thereon.] The Senatus shall transmit such schemes, with such observations as it may think fit to make thereon, to the University Court for its approval.<sup>1</sup>

(c) The University Court shall not grant or continue recognition to any institutions or teachers unless it shall be satisfied that their courses of instruction are equivalent to the courses sanctioned in the Universities of Scotland.

5. The candidate must have attended for at least three years the Medical and Surgical Practice of a General Hospital at Glasgow or elsewhere, which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons, and is recognised for the purpose by the University Court.<sup>2</sup>
6. The candidate must have attended Clinical Surgery during a course or courses extending over not less than nine months. These courses may be conducted by the Professor of Clinical Surgery, or by Professors or Lecturers appointed for the purpose by the University Court, or by the ordinary surgeons of a general hospital defined and recognised as hereinbefore provided, and shall consist of regular instruction at the bedside, along with Clinical Lectures.
7. The candidate must have attended Clinical Medicine during a course or courses extending over not less than nine months. These courses may be conducted by the Professor of Clinical Medicine, or by Professors or Lecturers appointed for the purpose by the University Court, or by the ordinary physicians of a general hospital defined and recognised as hereinbefore provided, and shall consist of regular instruction at the bedside, along with Clinical Lectures.
8. The candidate must have attended a course of instruction in Mental Diseases, of such duration, and so apportioned between lectures, demonstrations, and clinical instruction, as the Senatus, with the approval of the University Court, may from time to time determine.  
Under this sub-section the Senate, with the approval of the University Court, has determined that each candidate for the Degree of M.B. and Ch.B. shall be required to attend a course of instruction in Mental Diseases, given by the University Lecturer or by a recognised teacher, consisting of not less than eighteen meetings. Six of these may be class-room lectures, and the others shall be demonstrations in the wards of an asylum for the insane.
9. The candidate must have attended a course of twenty-five meetings on Practical Pharmacy in a University or recognised School of Medicine, or have dispensed drugs for a period of three months in an hospital or dispensary, or in an establishment recognised by

<sup>1</sup> See note on page 284.

<sup>2</sup> On 7th October, 1892, the University Court recognised every General Hospital in the United Kingdom which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons.

the Pharmaceutical Society, *i.e.* in the establishment of any chemist and druggist or pharmaceutical chemist of Great Britain, or any pharmaceutical chemist of Ireland, who is registered in the books of the Pharmaceutical Society of Great Britain or of the Pharmaceutical Society of Ireland respectively.<sup>1</sup>

10. The candidate must have attended, for at least six months, by apprenticeship or otherwise, the out-practice of an hospital, or the practice of a dispensary, or of a physician or surgeon, or of a member of the London or Dublin Society of Apothecaries. He must have acted as clerk in the medical and dresser in the surgical wards of a public hospital; and must also have availed himself, to such an extent as may be required by the Senatus, with the approval of the University Court, of opportunities of studying at an hospital or dispensary *Post-mortem* Examinations, Fevers, Diseases of Children, Ophthalmology, or such other special departments as may from time to time be determined.

Under this sub-section the Senate, with the approval of the University Court, has determined as follows:—

A. Each candidate for M. B. and Ch. B. shall be required to attend—

1. Demonstrations in the *post-mortem* room of a recognised hospital, with practical instruction in making *post-mortem* examinations. The student must have attended during his curriculum at least twenty examinations.
2. A course of clinical instruction in Fevers, consisting of at least ten meetings in a hospital for infectious diseases containing not less than fifty beds.
3. A practical course of instruction in Ophthalmology of not less than twenty meetings. Six of these may be classroom lectures, and the others shall be for clinical instruction in the wards of a recognised hospital,<sup>2</sup> or in the wards of a hospital and in a dispensary both recognised for the purpose. The course shall include sufficient practical instruction in the methods of examining the eye.

B. Each candidate is also recommended to attend the following:—(a) Diseases of Children, (b) Diseases of the Ear, (c) Diseases of the Throat and Nose, and (d) Diseases of the Skin, in short practical courses of ten meetings.

*N.B.*—This is not to be understood as preventing a teacher in any speciality giving a fuller course to such students as may desire to follow out more fully any particular branch.

11. The candidate must have attended, under the superintendence of a registered medical practitioner, twelve cases of labour, or such additional number as the Senatus, with the sanction of the University Court, may from time to time determine; or have attended

<sup>1</sup> The explanatory words in italics are taken from Ordinance No. 54, Section II., issued by the Universities Commission on 18th July, 1894, which came into operation on 11th May, 1895, having been on that date approved by Her Majesty in Council.

<sup>2</sup> This means a hospital recognised *ad hoc*, after application to the University Court in each case.

for three months the practice of a lying-in hospital, or of the maternity department of a general hospital or other public charitable institution, and have conducted personally six, or such an additional number of cases of labour as the Senatus, with the approval of the University Court, may from time to time determine.

12. The candidate must have been properly instructed in Vaccination at a Public Vaccination Station, by a Public Vaccinator, authorised by the proper Government Authority to grant Certificates of Proficiency in Vaccination.<sup>1</sup>
13. No candidate for a degree shall be deemed to have attended a class as part of the curriculum necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

VIII. With respect to the places and institutions at which the studies of the candidate may be prosecuted, the following regulations shall have effect:

1. Two of the five years of medical study must be spent in the University of Glasgow, each year of study including always the attendances specified in Section VII., sub-section 2.
2. The remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such medical schools or under such teachers as may be recognised for the purpose by the University Court, each year of study during the first four years including always the attendances specified in Section VII., sub-section 2.
3. Of the subjects of study specified in Section VII., sub-section 4, not less than eight must be taken in the University of Glasgow, or (subject always to the provisions as to attendance contained in the immediately preceding sub-sections) in some other University of the United Kingdom, or in some Foreign or Colonial University entitled to confer the Degree of Doctor of Medicine recognised for the purpose by the University Court, or in a College incorporated with, or affiliated to a University entitled to confer the Degree of Doctor of Medicine recognised for the purpose by the University Court: Provided always that where in any of said subjects of study two or more courses are required, the taking of one of those courses shall constitute a taking of the subject for the purpose of this sub-section.
4. The remainder of such subjects of study may (subject always as aforesaid) be taken in such medical schools or under such teachers as may be recognised for the purpose by the University Court.
5. All candidates, not Matriculated Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Glasgow, must, at the commencement of each year of such attendance, enrol their names in a

<sup>1</sup> The recognised Vaccine Departments in Glasgow are—Western Infirmary and Royal Infirmary.

- book to be kept in the University for that purpose, paying a fee of the same amount as the Matriculation Fee paid by students of the University, and having, in respect of such payment, a right to the use of the Library of the University.
6. The fee for attendance, for purposes of graduation, on the courses of instruction of recognised Extra-Academical Teachers in Glasgow shall be not less than the amount exigible for the corresponding courses in the University.
  7. The University Court shall not recognise as qualifying for examination in any of the subjects specified in Section VII., sub-section 4, the class of any teacher who is at the time a teacher of more than one of the said subjects, except in those cases where Professors in the University are at liberty to teach two subjects: Provided always that a Professor or other teacher in any endowed public College or institution, who by the terms of his appointment is required to teach more than one subject of medical study therein, may be recognised under sub-section 2 of this section, as a teacher of any one of the subjects which he teaches.
  8. A teacher, attendance on whose course of instruction shall, before the date of the approval of this ordinance by her Majesty in Council, have been recognised for the purposes of graduation in the University, shall not require to obtain a new recognition from the University Court; and attendance on the course of instruction of every such teacher may continue to be recognised as heretofore.
  9. It shall be in the power of the University Court, if it shall see cause, at any time to withdraw or suspend any recognition which it may have granted.

IX. In the University of Glasgow it shall be the duty of the Professors of the subjects specified in Section VII., sub-section 4 hereof (except Practical Anatomy and such other subjects as the Senatus, with the approval of the University Court, may from time to time determine), so to conduct the courses that Students may receive instruction sufficient for graduation in any one of the said subjects by attendance on one course of five or six months, or of two and a half or three months, as the case may be.<sup>1</sup>

X. If any candidate shall, before presenting himself for his Preliminary Examination, have attended in any University of the United Kingdom, or in any University or Institution specially approved, or

<sup>1</sup> Doubt being entertained as to the construction of this Section, the question was submitted to the Universities Commissioners, and evoked from them the following deliverance:—

It is not intended to require of the Professor a complete course of instruction by lectures during each session, or to limit the examinations for degrees to subjects which shall be discussed in the lectures of the Professor at the time that the student attended the course. The word "instruction," as used in this Section, is to be held to include lectures upon such parts of the subject as the Professor may be able to overtake, supplemented by directions as to the use of text-books or other sources of information for the remainder of the subject: and it is also intended that the examinations may be taken over the whole field, even when the Professor has not been able to include it all in his course of lectures.

under any Teacher specially recognised for the purpose by the University Court, a course or courses of instruction in Physics, Chemistry, Botany, or Zoology, equivalent in the judgment of the Senatus to the qualifying course in the same subject in the University of Glasgow, such attendance shall (notwithstanding anything hereinbefore ordained) be held as entitling him to be examined in these subjects; and if the candidate shall have attended such course or courses in each of the said subjects, he shall be held to have completed his first year of Medical Study: Provided always that the evidence of such attendance at such equivalent course or courses shall be presented to the Senatus at the time when the candidate presents himself for his Preliminary Examination; and the Senatus shall, if satisfied, grant a certificate to that effect: *Provided also that the provisions of this section shall not have effect except where the University Court shall allow their application after a report by the Senatus Academicus, setting forth special grounds therefor in the case of any candidate named in the report.*<sup>1</sup>

#### PROFESSIONAL EXAMINATION FOR THE DEGREES OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY.<sup>2</sup>

XI. Each candidate shall be examined both in writing and orally, and also clinically where the nature of the subject admits, in the following divisions, viz.:—*First*, in Botany, Zoology, Physics, and Chemistry; *Second*, in Anatomy, Physiology, and Materia Medica and Therapeutics; *Third*, in Pathology, and Medical Jurisprudence and Public Health; *Fourth*, in Surgery and Clinical Surgery, Practice of Medicine and Clinical Medicine, and Midwifery.

In subjects which admit of practical instruction, the examination shall be such as to test the practical acquirements of the candidate.

Provided always that if a candidate have obtained in a University of the United Kingdom, or other University specially recognised for the purpose by the University Court, a degree in Science or in Arts, granted in either case after a course of study and an examination in Botany, Zoology, Physics, and Chemistry, he shall be held to have passed his examinations in the said subjects.

*Provided also that if a candidate have completed in a University of the United Kingdom a course of study and passed an examination in Botany, Zoology, Physics, or Chemistry qualifying for a degree in Science or in Arts, he shall be held to have passed the examinations in such subject or subjects.*

*If a candidate have obtained a degree in Science or in Arts in any University other than a University of the United Kingdom, granted in either case after a course of study and an examination in Botany, Zoology, Physics, or Chemistry, it shall be in the power of the University Court to exempt such candidate from the examinations in such subject or subjects:*

<sup>1</sup> The proviso in italics is taken from Ordinance No. 54, Section V., issued by the Universities Commission on 15th July, 1894, which came into operation on 11th May, 1895, having been on that date approved by Her Majesty in Council.

<sup>2</sup> For Table of Fees and Dates of Examinations, see page 296.

*Provided that the course of study and the standard of examination in each case are satisfactory in the judgment of the Senatus Academicus.*<sup>1</sup>

XII. Candidates who profess themselves ready to submit to an examination in the subjects comprised in the first division, viz.:—Botany, Zoology, Physics, and Chemistry, may be admitted to examination in all or any two of these subjects at any examination held after they have attended a full course in each of the subjects professed.

XIII. Candidates who have passed their examination in the subjects comprised in the first division may be admitted to examination in the second division at the end of the third winter session.

Provided that candidates who so desire may postpone their examination in *Materia Medica* and *Therapeutics* until the close of the summer session following.

XIV. Candidates who have passed their examinations in the subjects comprised in the first and second divisions may be admitted to examination in the third division at the end of the fourth winter session.

Provided that candidates who so desire may postpone their examination in *Medical Jurisprudence* and *Public Health* until the close of the summer session following.

XV. Candidates who have passed their examinations in the subjects comprised in the first, second, and third divisions may be admitted to examination in the fourth or final division, when they have completed the fifth year of study. [In 1908 and thereafter there will be a Final Professional Examination in December as well as in summer.]

XVI. If any candidate at these examinations be found unqualified in one or more subjects he shall not again be admitted to examination unless he has pursued his medical studies for such time, and subject to such conditions, as the Faculty of Medicine may prescribe.

Under this section the Faculty of Medicine, with the sanction of the Senate, has laid down the following rule: No student, who in the Final Professional Examination has been found unqualified in any subject, shall be re-admitted to examination without furnishing evidence of having further studied that subject for such a period as the Examiners may fix.

XVII. If any candidate at these examinations be found to have passed in one or more subjects with sufficient merit, he shall not be liable to re-examination in such subject or subjects, although he may have been found unqualified in a subject or subjects comprised in the same division as hereinbefore specified.

XVIII. Every candidate must deliver, on or before such day as the Senatus may from time to time determine, to the Dean of the Faculty of Medicine, a declaration, in his own handwriting, that he has completed his twenty-first year, or that he will have completed it on or before the day of graduation, and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.

<sup>1</sup>The words in italics are taken from Ordinance No. 54, Sections III. and IV., issued by the Universities Commission on 18th July, 1894, which came into operation on 11th May, 1895, having been on that date approved by Her Majesty in Council.



XIX. After the candidate has satisfied the Examiners, the Dean of the Faculty of Medicine shall lay the proceedings before the Senatus, by whose authority the candidate shall be admitted, on such day as the Senatus may from time to time appoint, to the Degrees of Bachelor of Medicine and Bachelor of Surgery, on payment of the required fees.<sup>1</sup>

XX. Candidates for graduation shall produce evidence of their having conformed to the regulations which were in force at the time they commenced their medical studies: Provided that any student who began his medical studies before 1st January, 1892, shall be entitled to graduate under the system in force before or after that date, according as he shall comply with the regulations in force in the University before<sup>2</sup> or after that date.

#### PROFESSIONAL EXAMINATION FOR THE DEGREE OF DOCTOR OF MEDICINE.

XXI. 1. Subject to the conditions hereinafter specified, the Degree of Doctor of Medicine shall be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Bachelor of Surgery of the University of Glasgow, and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged subsequently to having received the Degrees of Bachelor of Medicine and Bachelor of Surgery for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in Practice other than Practice restricted to Surgery.

2. Each candidate for the Degree of Doctor of Medicine shall be required to pass an examination in Clinical Medicine and in such of its special departments as the Senatus, with the approval of the University Court, by Regulations framed from time to time, shall determine; and he may present himself for examination in Clinical Medicine at any period of examination subsequent to one year after he has received the Degrees of Bachelor of Medicine and Bachelor of Surgery.

Under this sub-section the following regulations have been framed by the Senatus, and approved by the University Court:—The Examination in Clinical Medicine for the Degree of Doctor of Medicine shall for each candidate consist of a written Report and Commentary, with any oral questions that may be considered desirable, upon at least three Medical cases. In the selection of the cases, special regard shall be given to the opportunities they afford for testing the candidate, not only in the ordinary methods of clinical investigation, but also in the more advanced methods requiring practical knowledge in the applications of the ophthalmoscope and laryngoscope, in the chemical and microscopical examination of excreta, the quantitative determination and

<sup>1</sup> For Table of Fees and Dates of Examination, see page 296.

<sup>2</sup> These regulations may be found at pp. 188–192 of the *University Calendar* for session 1895–96, and in the *Calendars* for preceding sessions.

microscopic characters of the chief constituents of blood possessing clinical importance, the recording by instruments of the condition of the circulation, the applications of electricity, etc.

Provided always that one of the cases on which a candidate is examined may, if the candidate on entering his name for the Examination declare a wish to that effect, be from one of the following departments, namely, Diseases of Women, Diseases of Children, Mental Diseases, Zymotic Diseases, Diseases of the Eye, Diseases of the Throat, Diseases of the Ear, Diseases of the Skin. Should the candidate specialise in one of these departments he will be expected to show high proficiency in it.

The examinations for M.D. will be held in the month of October, each Session. Candidates must enter their names and lodge their Theses with the Assistant Clerk (Matriculation Office) on or before 1st June.

3. Each candidate for the Degree of Doctor of Medicine shall submit for the approval of the Faculty of Medicine a Thesis on any branch of knowledge comprised in the second, third, or fourth examinations for the Degrees of Bachelor of Medicine and Bachelor of Surgery, which he may have made a subject of study after having received those Degrees, excepting subjects which are exclusively Surgical; and the Thesis, accompanied by a declaration signed by the candidate, that the work has been done and the Thesis composed by himself,<sup>1</sup> shall be lodged with the Dean of the Faculty of Medicine (at the Matriculation Office) on or before a date to be fixed by the Senatus (1st June).
4. A Bachelor of Medicine and Bachelor of Surgery, who produces to the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to the examination in Clinical Medicine at any period of examination after he has received such degrees; but the Degree of Doctor of Medicine shall not be conferred on him unless he shall produce a certificate that, subsequently to having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, he has been engaged for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively surgical, and unless his Thesis in the judgment of the Faculty of Medicine is of exceptional merit.

*Bachelors of Medicine and Masters of Surgery of the University of Glasgow, who have graduated under the regulations in force before the fifth day of August, 1892, may proceed to the Degree of*

The Faculty of Medicine give notice that no Thesis will be approved unless it gives evidence of original observation, or, if it deal with the researches of others, gives a full statement of the literature of the question, with accurate references and critical investigation of the views or facts cited: mere compilations will in no case be accepted.

*Doctor of Medicine under the provisions of this section, in the same manner as if they held the Degree of Bachelor of Surgery.*<sup>1</sup>

#### PROFESSIONAL EXAMINATION FOR DEGREE OF MASTER OF SURGERY.

- XXII. 1. Subject to the conditions hereinafter specified the Degree of Master of Surgery shall be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Bachelor of Surgery of the University of Glasgow, and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to his having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in practice other than practice restricted to Medicine.
2. Each candidate for the Degree of Master of Surgery shall be required to pass an examination in the following subjects:—Surgical Anatomy, Operations upon the dead body, and Clinical Surgery, and in such of the special departments of Clinical Surgery as the Senatus, with the approval of the University Court, by Regulations framed from time to time, may determine; and he may present himself for examination in these subjects at any period of examination subsequent to one year after he has received the Degrees of Bachelor of Medicine and Bachelor of Surgery.

Under this sub-section the following regulations have been framed by the Senatus, and approved by the University Court:—The Examination in Clinical Surgery for the Degree of Master of Surgery shall for each candidate consist of a written Report and Commentary, with any oral questions that may be considered desirable on at least three Surgical cases.

Provided that one of the three Surgical cases on which a candidate is examined shall, if the candidate on entering his name for the Examination declare a wish to that effect, be from one of the following departments, namely, Surgical Diseases of Women, Diseases of the Throat, Diseases of the Eye, Diseases of the Ear. Should the candidate specialise in one of these departments he will be expected to show high proficiency in it.

3. Each candidate for the Degree of Master of Surgery shall submit for the approval of the Faculty of Medicine a Thesis on any branch of knowledge comprised in the second, third, or fourth Examinations for the Degrees of Bachelor of Medicine and Bachelor of Surgery, which he may have made a subject of study after having received those Degrees, excepting subjects that are exclusively medical; and the Thesis, accompanied by a declaration signed by the candidate that the work has been done and the

<sup>1</sup> Taken from Ordinance No. 54, Section VI., which was issued by the Universities Commissioners on 15th July, 1894, and came into operation on 11th May, 1895, having on that date been approved by Her Majesty in Council.

Thesis composed by himself,<sup>1</sup> shall be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.

4. A Bachelor of Medicine and Bachelor of Surgery who produces to the Senatus satisfactory evidence of his intention of entering, within twelve months after obtaining such degrees, on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to examination in the subjects specified in Sub-section 2 of this section, at any period of examination after he has received such degrees; but the Degree of Master of Surgery shall not be conferred on him unless he shall produce a certificate that, subsequently to having received the Degrees of Bachelor of Medicine and Bachelor of Surgery, he has been engaged for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively medical, and unless his Thesis, in the judgment of the Faculty of Medicine, is of exceptional merit.

#### FEES.

XXIII. The fee to be paid for the Degrees of Bachelor of Medicine and Bachelor of Surgery shall be twenty-two guineas, and the proportion of this sum to be paid by a candidate at each division of the examination shall be regulated from time to time by the University Court. The fee to be paid for the Degree of Doctor of Medicine shall be ten guineas, exclusive of any stamp duty which for the time may be exigible. The fee to be paid for the Degree of Master of Surgery shall be ten guineas.

#### EXAMINERS.

XXIV. The Examiners for graduation in Medicine in the University of Glasgow shall be the Professors in that University, together with such Lecturers in the University and such additional Examiners, to be appointed by the University Court, as the University Court shall deem necessary: Provided that the Court shall make such provisions as will ensure that every candidate shall be examined in each subject by at least two Examiners, of whom one shall not be a Professor or Lecturer in the University. The examinations shall be conducted in writing and orally and also clinically, when the nature of the subject admits, under regulations framed by the Senatus subject to the approval of the University Court.

#### DISTINCTIONS ATTAINABLE BY STUDENTS AND GRADUATES OF MEDICINE.

Candidates who have shown special merit in any subject or subjects at any of the Professional Examinations will be announced as having passed in such subject or subjects "with distinction."

Candidates who have shown special merit as indicated by the aggre-

<sup>1</sup> See footnote on page 292.

gate results of the four Professional Examinations will be announced, at the time of Graduation, as having obtained Commendation or Honours, according to the degree of excellence.

In connection with the Higher Degrees in Medicine and Surgery two grades of distinction are also awarded, viz., Commendation and Honours. The Bellahouston Trustees have put it in the power of the University to award three Gold Medals yearly to those who, having gained Honours, are pronounced by the Senate on the Report of the Faculty of Medicine worthy of this highest distinction for the excellence of their Theses. Graduates in Medicine or Surgery to whom Honours are awarded for their Theses are requested to publish these Theses in Journals or otherwise, and to supply copies to the University for exchange with other Universities.

#### GRADUATION.

The terms for conferring Medical and Surgical Degrees in session 1907-8 are 7th November, 1907; 6th February, 1908; 21st April, 1908; and 21st July, 1908.

Candidates proceeding to graduation, if not already Members of the General Council of the University, are required by the Act, 44 and 45 Vict., ch. 40, to pay to the Registrar of the General Council the Registration Fee, and furnish to him the particulars required for their enrolment in the General Council. This should in all cases be done at least two clear days before the day of graduation.

In accordance with the Promissory Oaths Act, 1868, a Declaration in the following English form is now substituted for the Latin Oath<sup>1</sup> formerly required to be taken and subscribed by every candidate on graduation:—

I make this solemn declaration in virtue of the Provisions of the Promissory Oaths Act, 1868, substituting a Declaration for Oaths in certain cases.

I do solemnly and sincerely declare, that, as a Graduate in Medicine of the University of Glasgow, I will exercise the several parts of my profession, to the best of my knowledge and abilities, for the good, safety, and welfare of all persons committing themselves, or committed to my care and direction; and that I will not knowingly or intentionally do anything or administer anything to them to their hurt or prejudice, for any consideration, or from any motive whatever. And I further declare, that I will keep silence as to anything I have seen or heard while visiting the sick which it would be improper to divulge.

#### REGISTRATION OF MEDICAL PRACTITIONERS.

Graduates should register as soon as possible with the Branch Registrar for Scotland, at 54 George Square, Edinburgh. Fee £5 1s. Additional qualifications, £1 each. Forms of application may be had from the Assistant-Clerk (Matriculation Office).

<sup>1</sup> *The Oath was in these words:*—Testor Deum omnipotentem me hoc Ius-jurandum pro virili servaturum; Victus rationem aegris commodam et salutarem præsripturum; nullius intercessionem nec sponte noxium pharmacum cuiquam propinaturum; sed sanete et caste vitam artemque meam instituturum; In quascunque domos intravero ad aegrotantium duntaxat salutem ingressurum et ab omni injuria inferenda procul futurum: Quaecunque inter curandum videro audiverove siquidem ea efferre non expediat silentio suppressurum.

# TABLE OF EXAMINATIONS FOR DEGREES IN MEDICINE TO BE HELD DURING SESSION 1907-8.

Fees.	Names to be given in and Fees paid to Assistant-Clerk 1 (Matriculation Office). Date. <sup>2</sup>	Dates of Written Examinations and Hours at which the different Papers will be set. Printed Schedules with detailed instructions for filling up may be obtained from the Assistant-Clerk 1 (Matriculation Office). The Professional Oral Examinations follow immediately after the Written.			
		1907.	1908.	1907.	1908.
Under the Old Regulations the Fee for each Professional Examination is £5 5s.; under the New, the Fees are—First, £6 6s.; Second, £6 6s.; Third, £5 5s.; Fourth, £5 5s.	12th September, 1907,	Mon., 3th Sept., - Botany - - - - -	Mon., 20th March, Botany - - - - -	Chemistry - - - - -	Chemistry - - - - -
		Mon., 30th " - Materia Medica - - - - -	Mon., 30th " - Materia Medica - - - - -	Physics - - - - -	Physics - - - - -
		Tues., 1st Oct., - Zoology - - - - -	Tues., 31st " - Zoology - - - - -	Physiology - - - - -	Physiology - - - - -
		Tues., 1st " - Anatomy - - - - -	Tues., 31st " - Anatomy - - - - -	Pathology - - - - -	Pathology - - - - -
	12th March, 1908,	Tues., 1st " - - - - -	Tues., 31st " - - - - -	Public Health - - - - -	Public Health - - - - -
		Wed., 2nd " - Medical Jurisprudence - - - - -	Wed., 1st April, - Medical Jurisprudence - - - - -	Chemistry - - - - -	Chemistry - - - - -
				Physics - - - - -	Physics - - - - -
				Physiology - - - - -	Physiology - - - - -
	28th May, 1908,			Public Health - - - - -	Public Health - - - - -
				Surgery - - - - -	Surgery - - - - -

<sup>1</sup> For Women Students, Miss Galloway, Queen Margaret College.

<sup>2</sup> When names are not given in and fees are not paid on or before the stated dates, a late Entry Fee of Ten Shillings must be paid before the candidate can be enrolled for examination. A candidate is not held to be enrolled for examination until his name is entered, the fee paid, and all the necessary Certificates, etc., lodged. Every candidate must matriculate at the University for the session in which he enters for professional examination or for graduation.

For Dates in regard to Medical Preliminary Examination, see page 218.

## 5.—GRADUATION IN LAW.

Two Degrees in Law are conferred, after examination, by the University of Glasgow, viz., Bachelor of Laws (LL.B.) and Bachelor of Law (B.L.).

By regulation of the Faculty of Advocates, any one who has obtained the Degree of LL.B. from a Scottish University is held qualified in General Scholarship and Law with a view to admission to the Bar, without examination or other evidence of such qualification, except as stated on page 132.

By the Law Agents Act, 36 and 37 Vict., c. 63, the holder of a degree in Law or in Arts of a University in Great Britain or Ireland, granted after examination, is qualified to apply for admission as a Law Agent after an apprenticeship of three years, instead of five, as required in the ordinary case; and by Act of Sederunt of 20th July, 1878, any applicant who holds the Degree of LL.B. or of B.L. of any Scottish University is exempted from any examination in Law before the Examiners of Law Agents, excepting only on forms of Process, Civil and Criminal, and a similar provision is contained in the Act of Sederunt of 18th March, 1893. (See also page 133.)

**Degree of LL.B.**

The following are the provisions of Ordinance No. 39, General No. 11, which, having been approved by Her Majesty in Council of 28th May, 1894, applies to all students who, after 30th September, 1894,<sup>1</sup> began their course of study with a view to graduation in Law:—

I. No one shall be admitted to examination as a candidate for the Degree of Bachelor of Laws (LL.B.) unless he be a graduate in Arts of one of the Universities of the United Kingdom; or of any Foreign or Colonial University specially recognised for the purpose by the University Court.

II. The course of study in Law for the Degree of Bachelor of Laws shall include the following subjects:—

- (1) Jurisprudence, General or Comparative, during a course of not less than forty lectures.
- (2) The Law of Nations or Public International Law, during a course of not less than forty lectures.
- (3) Civil Law during a course of not less than eighty lectures.
- (4) Law of Scotland, or Law of England, during a course of not less than eighty lectures.
- (5) Constitutional Law and History, during a course of not less than eighty lectures.
- (6) Conveyancing, during a course of not less than eighty lectures; or Political Economy, or Mercantile Law, during a course of not less than eighty lectures.
- (7) Any two of the following subjects, namely:—International Private Law, Political Economy, Administrative Law, and Forensic Medicine; in each case during a course of not less than forty lectures.

<sup>1</sup> Students who began their course previous to 1894 may qualify themselves for graduation in Law under the old regulations, which are given at pp. 227-229 in the *University Calendar* for 1900-1901 and in the *Calendars* for preceding sessions.

III. (1) The course of study necessary for the Degree of Bachelor of Laws shall extend over three academical years, one of which at least must be spent in the University in which the candidate intends to graduate, the other two may have been spent in any other University or School of Law specially recognised by the University Court.

(2) No candidate for a degree shall be deemed to have attended a class as part of the course of study necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

IV. Candidates must undergo examination in the subjects prescribed in Section II. hereof; and they must pass at one examination in at least two of those subjects. Before presenting themselves in any subject the candidates must have attended the requisite course of instruction in such subject. Candidates who have passed an examination for another degree in any of the said prescribed subjects in the same University may be exempted from examination in such subject or subjects, provided that the Examiners are satisfied that the previous examination in such subject or subjects has been passed on a sufficiently high standard.

V. Every candidate for the Degree of Bachelor of Laws shall be examined both orally and in writing on each of the subjects in the course of study above prescribed in which he presents himself for examination.

VI. (1) Distinction may be awarded to candidates who have displayed exceptional merit in their examinations.

(2) For the Degree of Bachelor of Laws a diploma shall be given, setting forth the subjects in which the candidate has passed, and the distinction (if any) he has attained.

VII. The Examiners shall be the Professors of or Lecturers on the subjects included in the said examinations, and additional Examiners appointed by the University Court. The mode of conducting the examination shall be fixed from time to time by the *Senatus Academicus*.

VIII. Every student who at the time when this ordinance shall come into operation shall have completed a part of his course with a view to graduation as Bachelor of Laws in any Scottish University, under regulations hitherto in force in that University, and shall thereafter complete his course of study in conformity with such regulations, may become a candidate for the Degree of Bachelor of Laws without complying with the provisions of this ordinance.

IX. Ordinance numbered 75 of the Commissioners under the Universities (Scotland) Act, 1858, is hereby repealed, in so far as it is inconsistent with this ordinance.

X. This ordinance shall come into force at the beginning of the first academical year after the date on which it is approved by Her Majesty in Council. [Approved on 28th May, 1894.]

#### Degree of B.L.

The following are the provisions of Ordinance No. 40, General No. 12, which, having been approved by Her Majesty in Council on 28th May, 1894, applies to all students who, after 30th September, 1894, began their course of study with a view to graduation in Law.

I. No one shall be admitted to examination as a candidate for the Degree of Bachelor of Law (B.L.) unless he be a graduate in Arts of one



of the Universities of the United Kingdom, or of any Foreign or Colonial University specially recognised for the purpose by the University Court; or until he shall have passed—

A. The Preliminary Examination in the Faculty of Arts, or its equivalent, as specified in Ordinance No. 11 (General No. 6—Regulations for Degrees in Arts); and

B. An Examination in one of the Scottish Universities, to be conducted by the Examiner in Arts, in the following subjects, on the standard of examination for the Ordinary Degree of Master of Arts:—

(1) Logic and Psychology; or, in the option of the candidate, Moral Philosophy.

(2) Latin.

(3) One additional Arts subject, not being one of those which belong also to the Faculty of Law.

And he must have studied at least one of these subjects in a full course in a Scottish University, or an equivalent course in another University approved by the University Court.

II. The course of study in Law necessary for the Degree of Bachelor of Law shall include the following subjects:—

1. Civil Law, during a course of not less than eighty lectures;<sup>1</sup> or a half course in Civil Law where in any University a full course is not available: Provided that in the latter case, candidates who are not already graduates in Arts shall be required to take in addition a course in such subject in Arts as may be sanctioned by the Senatus Academicus, or a half course in one or other of the following branches of Law:—

(a) Jurisprudence, General or Comparative.

(b) The Law of Nations, or Public International Law.

(c) Constitutional Law and History.

(d) International Private Law.

(e) Mercantile Law.

(f) Administrative Law.

2. Law of Scotland, during a course of not less than eighty lectures.

3. Conveyancing, during a course of not less than eighty lectures.

4. Forensic Medicine, during a course of not less than forty meetings of the class; or, in the option of the candidate, a half course in one of the branches of Law specified in Sub-section 1 of this section<sup>1</sup> if not already taken.

III. (1) The course of study in Law necessary for the Degree of Bachelor of Law shall extend over two academical years.

(2) No candidate for a degree shall be deemed to have attended a class as part of the course of study necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

(3) The candidate may prosecute his studies during the prescribed two years in one Scottish University, or in different Scottish Universities, or in a Scottish University and a University or School of Law specially recognised by the University Court; but one at least of these years must

<sup>1</sup> The remainder of this sub-section does not apply to the University of Glasgow, which provides a full course in Civil Law.

have been spent, and all the examinations in the subjects mentioned in the preceding section must have been passed at the University in which he intends to graduate.

IV. The candidate for the Degree of Bachelor of Law must undergo examination and pass in the four or more subjects selected by him; but he may present himself for examination in one subject or group of subjects at a time, provided that he has completed the course of study for such subject or group of subjects, and provided also that in that case a higher standard of proficiency shall be exacted.

V. Every candidate for the Degree of Bachelor of Law shall be examined, both orally and in writing, on each of the subjects in the course of study above prescribed, in which he presents himself for examination.

VI. (1) Distinction may be awarded to candidates who have displayed exceptional merit in their examinations.

(2) For the Degree of Bachelor of Law a diploma shall be given, setting forth the subjects in which the candidate has passed, and the distinction (if any) he has attained.

VII. The Examiners shall be the Professors of and Lecturers on the subjects included in the said examinations, and additional Examiners appointed by the University Court. The mode of conducting the examinations shall be fixed from time to time by the *Senatus Academicus*.

VIII. Every student who at the time when this ordinance shall come into operation shall have completed a part of his course with a view to graduation as a Bachelor of Law in any Scottish University under regulations hitherto in force in that University, and shall thereafter complete his course of study in conformity with such regulations, may become a candidate for the Degree of Bachelor of Law without complying with the provisions of this ordinance.

IX. Ordinance numbered 75 of the Commissioners under the Universities (Scotland) Act, 1858, is hereby repealed, in so far as it is inconsistent with this ordinance.

X. This ordinance shall come into force at the beginning of the first academical year after the date on which it is approved by Her Majesty in Council. [Approved on 28th May, 1894.]

### SUBJECTS OF EXAMINATION.

The examinations for LL.B. and B.L. in session 1907-8 will embrace the following books and subjects, viz. :—

*In Civil Law.*—Institutes of Justinian (Ed. Moyle or Sandars) and the Class Lectures; also Dig., Lib. XVIII., Tit. I.—translated and annotated by Mackintosh—Roman Law of Sale.

*In the Law of Scotland.*—In addition to the Class Lectures, the books recommended are Bell's Principles of the Law of Scotland, and Erskine's Principles of the Law of Scotland. In Criminal Law, Macdonald's Criminal Law and Erskine's Principles. Recent editions of the works mentioned should be used.

*In Conveyancing.*—In addition to the Class Lectures, the books recommended are Duff's Feudal Rights, with Supplement; Lectures on Conveyancing, by Menzies; Lectures on Conveyancing, by A. M. Bell; and Craigie's Statutes.

*In Mercantile Law.*—In addition to the Class Lectures, the books recommended are Goudy on Bankruptcy, 3rd edition; Carver on Carriage by Sea, Part I. and Part III.; Hamilton's Commentary on the Bills of Exchange Act, 1882; Bell's Principles, 10th edition, Book I., Chapter 15.

*In Jurisprudence, General or Comparative.*—Holland's Jurisprudence; Maine's Ancient Law; Kant's Philosophy of Law (Hastie's translation).

*In the Law of Nations, or Public International Law.*—In addition to the Class Lectures the books recommended are Hall's International Law (5th ed.), or Lawrence's International Law. Candidates are expected to show a general acquaintance with the history of Modern Europe. The cases referred to in the lectures should be studied in the collections by Pitt Cobbett or Scott.

NOTE.—Candidates under the old regulations for LL.B. are required to sit also at the papers on Jurisprudence and International Private Law.

*In International Private Law.*—In addition to the Class Lectures and the Scots cases therein mentioned Rattigan's Private International Law. For reference Nelson's *Leading Cases*, Dicey's *Conflict of Laws*, and Westlake's *Private International Law* (4th ed.) will be found useful.

*In Constitutional Law and History.*—(1) The Outlines of English Constitutional History; (2) Existing Constitutional Law. In addition to the Class Lectures the books recommended are—Taswell-Langmead's English Constitutional History; Dicey's Law of the Constitution.

*In Forensic Medicine.*—Signs of Death with relation to Crime; Proximate Causes of Death; Medico-legal Forms of Death; Identity; Survivorship; Wounds; Blood-stains and their Detection; Insurance; Sexual Crimes;—Rape and Criminal Abortion; Pregnancy in its Medico-legal aspects; Infanticide and Concealment of Pregnancy; Divorce in its Medico-legal relations; Legitimacy and Paternity; Evidence of Poisoning; Poisoning by Mercury, Opium, and Carbolic Acid; Alcoholism in its Medico-legal aspects; Insanity.

*In Political Economy and other Arts Subjects.*—The subjects of examination for the Degree of M.A.

No candidate for the Degree of B.L. is admitted to an examination in Law subjects until he has passed in all the subjects of the preliminary examinations, and not fewer than two subjects in Law can be taken up at one examination, except in case of candidates for the Degree of B.L. under the new regulations.

TABLE OF EXAMINATIONS FOR DEGREES IN LAW, TO BE HELD DURING SESSION 1907-8.

Fee. <sup>1</sup>	Names to be given in and Fees paid to Assistant-Clerk (Matriculation Office). Date. <sup>2</sup>	Subjects of Examination.	DATES OF WRITTEN EXAMINATIONS AND HOURS AT WHICH THE DIFFERENT PAPERS WILL BE SET.	
			September-October, 1907.	March-April, 1908.
£1 1s. on each entry for Examination, and balance, if any, before Graduation. Total Fees— LL.B., £6 6s.; B.L., £5 5s.	{ 10th Sept., 1907, or 10th March, 1908, }	Constitutional Law, -	Mon., 30th Sept., 9—12 noon.	Mon., 30th March, 9—12 noon.
		Civil Law, -	" " 2—5 p.m.	" " 2—5 p.m.
		Scots Law, -	Tues., 1st Oct., 9—12 noon.	Tues., 31st " 9—12 noon.
		Public Internat. Law, -	" " 2—5 p.m.	" " 2—5 p.m.
		Jurisprudence, -	Wed., 2nd " 9—12 noon.	Wed., 1st April, 9—12 noon.
		Internat. Private Law, -	" " 2—5 p.m.	" " 2—5 p.m.
		Political Economy, -	" " 6—9 p.m.	" " 6—9 p.m.
		Conveyancing, -	Thurs., 3rd " 9—12 noon.	Thurs., 2nd " 9—12 noon.
		Forensic Medicine, -	" " 2—4 p.m.	" " 2—4 p.m.
		Mercantile Law, -	Friday, 4th " 9—12 noon.	Friday, 3rd " 9—12 noon.

For Dates of the Preliminary Examination and of the Examinations in Arts subjects necessary for B.L., see pp. 218 and 244.

<sup>1</sup> Under the old regulations the fee for LL.B. is £5 5s.; for B.L., £3 3s.

<sup>2</sup> When names are not given in and fees are not paid on or before the stated dates, a late Entry Fee of Ten Shillings must be paid before the candidate can be enrolled for examination. A candidate is not held to be enrolled for examination until his name is entered, the fee paid, and all the necessary certificates, etc., lodged.

## 6.—GRADUATION IN DIVINITY.

## Degree of Bachelor of Divinity.

In Ordinance No. 63 the Universities Commission laid down the following regulations for this degree :—

I. No one shall be admitted to examination<sup>1</sup> as a candidate for the Degree of Bachelor of Divinity (B.D.) in any University unless he be (1) a graduate in Arts of that University, and have taken a complete Theological Course in a Scottish University or Universities, or in an institution or institutions specially recognised for the purpose of this ordinance by the University Court, or partly in a Scottish University or Universities and partly in such institution or institutions :<sup>2</sup> or (2) a graduate in Arts of any Scottish University or other University specially recognised as aforesaid, and have completed his Theological Course, of which not less than two years' attendance shall have been given in the University in which he presents himself for examination.

II. The examination shall in all cases be conducted at the seat of the University granting the degree, and the Examiners shall be the Professors of or Lecturers on the subjects included in the examinations, and two additional Examiners appointed by the University Court. The mode of conducting the examination shall be fixed from time to time by the Senatus Academicus.<sup>1</sup>

III. Every student who at the time when this ordinance shall come into operation shall have completed a part of his Theological Course with a view to graduation as Bachelor of Divinity in any Scottish University, under regulations hitherto in force in that University, and shall thereafter complete his course of study in conformity with such regulations, may become a candidate for the Degree of Bachelor of Divinity without complying with the provisions of this ordinance.

IV. The Degree of Bachelor of Divinity shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

This degree is conferred on such qualified candidates as have satisfied the Examiners of their proficiency in the following departments, viz. :—

I. Hebrew, New Testament Exegesis, and Apologetics.

II. Divinity, Church History, and Biblical Criticism.

The following regulations were adopted by the Senate on 21st March, 1907 :—

1. Candidates who have completed the second year of their Theological studies, subsequent to the termination of their course in Arts, may be admitted to examination in the First Department.

2. Candidates who (a) have passed their examination in the subjects comprised in the First Department, and (b) have completed

<sup>1</sup> Ordinance No. 154 gives the Senatus Academicus power to admit candidates to examination in not more than three of the subjects, after the completion of the second session of attendance on their Theological course.

<sup>2</sup> The University Court has recognised *pro tanto* every Theological College in the United Kingdom having a distinct staff of teachers for the separate subjects, in so far as the Theological course is subsequent to the Arts course.

their Theological Course, may be admitted to examination in the Second Department.

3. Candidates for the First Department shall be examined in the subjects prescribed for the academic year in which the examination takes place.

4. Candidates for the Second Department shall be examined in Spring in the subjects prescribed for the academic year in which the examination takes place; or in Autumn in the subjects prescribed for the academic year immediately preceding.

The scheme of examination for session 1907-1908 will be as follows:

#### I. FIRST DEPARTMENT—

- (a) *Hebrew*.—(1) The books of Hosea, Amos, Micah, Nahum, Habakkuk, and Zephaniah; (2) Psalm lxxiii.—lxxxix.; (3) Portions of unpunctuated Hebrew to be punctuated and translated; (4) Translations from English into Hebrew.

Books which may be consulted:

(1) The relative Commentaries in the Cambridge Bible, in the International Critical Commentary (Harper), in the Expositor's Bible (G. A. Smith), in the Keil and Delitzsch Series (Keil), in the Speaker's Bible, in the Century Bible; Driver's Introduction, and other Commentaries therein mentioned; Farrar's Minor Prophets (in "Men of the Bible" Series); (2) Commentaries by Delitzsch, Perowne, Kirkpatrick (Cambridge Bible), and Cheyne; Cheyne's *Origin of the Psalter*; (3 and 4) Müller's or Davidson's *Hebrew Syntax*; Robertson's *Hebrew Exercises*.

- (b) *New Testament Exegesis*.—(1) Introduction to the Acts of the Apostles; (2) Exegesis of Mark i. 1—viii. 26, with critical comparison of the parallel passages in Matthew and Luke; (3) Exegesis of the Pastoral Epistles.

Books which may be consulted:

(1) Lekebusch, *Die Composition und Entstehung der Apostelgeschichte*; Spitta, *Die Apostelgeschichte*; (2) The relative Commentaries of Meyer, De Wette, Morison, Swete, or Alford; Bleek, *Synoptische Erklärung der drei ersten Evangelien*; (3) The Commentaries of Alford or Ellicott.

- (c) *Apologetics*.—(1) Philosophy and History of Religion; (2) Christian Apologetics; (3) Butler's *Analogy*.

Books which may be consulted:

(1) Fairbairn, *Philosophy of the Christian Religion*; Caird, *Introduction to the Philosophy of Religion*, and *Fundamental Ideas of Christianity*; Menzies, *History of Religion*. (2) Bruce, *Apologetics*; Fisher, *Grounds of Theistic and Christian Belief*; Mair, *Studies in the Christian Evidences*. (3) The *Analogy* of Butler, ed. by Joseph Angus (Religious Tract Soc.); Gladstone's *Butler*.

## II. SECOND DEPARTMENT—

- (a) *Divinity*.—(1) Doctrine of Man. (2) Doctrine of Sin. (3) The Theology of Schleiermacher.

Books which may be consulted.

(1) Beck, *Outlines of Biblical Psychology*; Laidlaw, *Bible Doctrine of Man*; Dickson, *St. Paul's use of the terms Flesh and Spirit*. (2) Müller, *Christian Doctrine of Sin*; Tulloch, *Christian Doctrine of Sin*. (3) Pfeiderer, *Development of Theology in Germany*; Lichtenberger, *History of German Theology*; Munro, *Schleiermacher*.

- (b) *Church History*.—The Ecclesiastical History of England, Scotland, and Ireland from the death of George II. to the death of George III. (1760-1820), including :

I. For England:—Church and State, George III., the American War, Test and Corporation Acts, No-Popery Riots, the French Revolution, the Napoleonic Wars; the Church of England, Subscription and Revision of the Prayer-Book, Orthodox Divines, the Evangelical Clergy, Missionary and Philanthropical movements; Calvinistic Methodism, Wesleyan Methodism, the Dissenters; Unitarianism; the Roman Catholics; with outlines of the lives of Archbishop Secker, Bishops Warburton, Hurd, Lowth, Horne, and Horsley; Parr, Paley, William Jones of Nayland, John Newton, Scott, Charles Simeon, and Henry Martyn; Whitefield, Countess of Huntingdon, Fletcher of Madeley; John and Charles Wesley; Taylor: Price, Priestley, Theophilus Lindsey; John Howard, Gurney, Thornton, Raikes, Carey, Wilberforce, Hannah More, Mrs. Trimmer; and, in their influence for or against religion, Samuel Johnson, Edward Gibbon, and William Cowper.

II. For Scotland:—Church and State, The Ascendency of the Moderates in the Church of Scotland, the Rise of the Popular Party, Unqualified Ministers Act, the Paraphrases, Cases of Dr. McGill and Professor Leslie, Pluralities, the Scottish Episcopalians, their Communion Office, Consecration of Bishop Seabury, Death of Prince Charles Edward, Convention of Laurencekirk, Repeal of the Penal Laws, Adoption of the Thirty-Nine Articles; the Seceders, Burghers and Anti-Burghers, the Associate Presbytery, Deposition of Mr. McCrie, United Associate Synod; Preaching of the brothers Haldane, Congregationalists, Baptists; the Roman Catholics; with outlines of the lives of Principals Robertson, George Campbell and George Hill, of Erskine, Blair, Alexander

Carlyle, Beattie, Wotherspoon, Andrew Thomson, Alexander Gerrard and Thomas Chalmers (till 1820); Bishops Skinner, Jolly, and Sandford; Thomas McCrie; Robert and James Haldane; and in their influence for or against religion, David Hume, Robert Burns, and Sir Walter Scott.

III. For Ireland:—Church and State, Relaxation of the Penal Laws; the Whiteboys, the Rebellion of 1798, the Union of the Parliaments; Burke, Pitt and Lord Castlereagh on Emancipation; the Church of Ireland, Revival of Religion, Union of the Church of Ireland with the Church of England; the Presbyterians, the Seceders, the Methodists; Unitarianism; the Roman Catholics, Maynooth; with outlines of the lives of Archbishops Robinson and Newcome and Magee, Bishops Law and Percy; Archbishop Murray; and Dr. Henry Cooke.

Books which may be consulted:

The Histories of Lecky (for England and Ireland), Adolphus, Aikin, Walpole, and Green; Histories of the Church of England (parts referring to period 1760-1800) by Overton and Relton; English Church in the Nineteenth Century, Overton (1800-1820), *Abbey*, Perry, *Hutton*, and Wakeman; "The Common Prayer Reformed" (1775), Bp. Horsley's *Controversial Works*; Brown, *History of Missions*; Boswell's *Life of Johnson*; Drysdale, *History of the Presbyterians in England*; Skeats, *History of the Free Churches of England*; Stoughton's *History of Religion in England*; Tyerman's *Life of Wesley*, John Wesley's *Diary*; for Scotland, Sir Henry Craik, *A Century of Scottish History*; J. Hepburn Miller, *A Literary History of Scotland*; Acts of the General Assembly (1760-1820). Ecclesiastical Histories of Scotland by Grub, Cunningham, Stephen and Niven (in Principal Story's *The Church of Scotland*, Vol. III.), Autobiography of Dr. Alexander Carlyle, Hanna, *Memoirs of Chalmers*, chapters I.-XX., Miscellaneous Writings of Dr. McCrie, Boswell and Johnson, *Tour in the Hebrides*; McKerrow, *History of the Secession*; Struthers, *History of the Relief Church*; Skinner, *Annals of Scottish Episcopacy*; for Ireland:—Froude, *English in Ireland*, Church Histories of Bp. Mant, Ball, and Olden (Church of Ireland); Magee on the *Atonement*; James Seaton Reid, and Killen (Irish Presbyterians), and Brennan (Roman Catholic).

(c) *Biblical Criticism*.—(1) Textual Criticism. (2) Hermeneutics.

Books which may be consulted:

(1) Davidson, *Biblical Criticism*; Tregelles, *Treatise in Horne's Introduction*, Vol. IV.; Scrivener, *Introduction to*



*the Criticism of the New Testament* (fourth edition) ; Westcott and Hort, *Prolegomena to the Greek Testament* ; Nestle, *Textual Criticism of the Greek New Testament*. (2) Davidson, *Sacred Hermeneutics* (1843), or *Treatise on Interpretation in Horne's Introduction*, Vol. II. ; Ernesti, *Institutio Interpretis* ; Immer, *Hermeneutik des Neuen Testaments*.

The scheme of examination for session 1908-1909 will be as follows :

## I. FIRST DEPARTMENT—

- (a) *Hebrew*.—(1) The books of Hosea, Amos, Micah, Nahum, Habakkuk, and Zephaniah ; (2) Psalms xc.—cvi. ; (3) Portions of unpointed Hebrew to be punctuated and translated ; (4) Translations from English into Hebrew.
- (b) *New Testament Exegesis*.—(1) Introduction to the Gospel according to Matthew ; (2) Exegesis of Matthew iv. 17.—xvi. 20, with critical comparison of the parallel passages in Mark and Luke ; (3) Exegesis of the Epistle to the Philippians.
- (c) *Apologetics*.—(1) Philosophy and History of Religion ; (2) Christian Apologetics ; (3) Antitheistic Theories.

Books which may be consulted :

(1) Fairbairn, *Philosophy of the Christian Religion* ; Caird, *Introduction to the Philosophy of Religion*, and *Fundamental Ideas of Christianity* ; Menzies, *History of Religion*. (2) Bruce, *Apologetics* ; Fisher, *Grounds of Theistic and Christian Belief* ; Mair, *Studies in the Christian Evidences*. (3) Flint, *Antitheistic Theories*.

## II. SECOND DEPARTMENT—

- (a) *Divinity*.—(1) Doctrine of the Person of Christ. (2) Doctrine of the Atonement. (3) The Ritschlian Theology.

Books which may be consulted :

Generally, any treatise on Systematic Theology at the relative points (e.g. Hodge, Macpherson, W. N. Clarke).

Specially—(1) Dorner, *Person of Christ* ; Pope, *Person of Christ* ; Du Bose, *Oecumenical Councils* ; Ottley and Gore on the Incarnation. (2) Macleod Campbell, Crawford, and Dale on the Atonement ; Denney, *Death of Christ*. (3) Ritschl, *Justification and Reconciliation* ; Garvie, *Ritschlian Theology* ; Orr, *Ritschlian Theology*.

- (b) *Church History*.—The Ecclesiastical History of England, Scotland, and Ireland from the death of George III. (1820) to the end of 1843.
- (c) *Biblical Criticism*.—(1) Textual Criticism ; (2) Hermeneutics.

TABLE OF EXAMINATIONS FOR THE DEGREE OF B.D. TO BE HELD DURING  
SESSION 1907-8.

Fees.	Names to be given in and Fees paid to the Assistant-Clerk (Matriculation Office). Date. <sup>1</sup>	Dates of Written Examinations and Hours at which the different Papers will be set.			
		FIRST DEPARTMENT.		SECOND DEPARTMENT.	
The Fee for each Department is £2 12s. 6d.	16th Oct., 1907.	Tues., 22nd Oct., 1907.	Hebrew, - - - -	Divinity, - - - -	- 9-12 noon.
		" "	Hebrew, - - - -	Textual Criticism, - - - -	2-5 p.m.
		Wed., 23rd Oct., 1907.	Apologetics, - - - -	Church History, - - - -	- 9-12 noon.
	27th Mar., 1908.	" "	New Testament Exegesis, -	Hermeneutics, - - - -	- 2 5 p.m.
		Thurs., 2nd Apr., 1908.	Hebrew, - - - -	Divinity, - - - -	- 9-12 noon.
		" "	Hebrew, - - - -	Textual Criticism, - - - -	2-5 p.m.
		Frid., 3rd Apr., 1908.	Apologetics, - - - -	Church History, - - - -	- 9-12 noon.
		" "	New Testament Exegesis, -	Hermeneutics, - - - -	- 2-5 p.m.

<sup>1</sup> Forms of application for examination may be obtained at the Matriculation Office. These forms, when filled up, must be forwarded by the candidates to the Dean of the Faculty of Theology, along with certificates of attendance on the required classes, and, having been certified by him, must then be transmitted to the Assistant-Clerk (Matriculation Office) on or before the date prescribed above. In entering for the Second Department candidates from other schools must produce, in addition to class certificates, evidence that they have completed, or are about to complete, their Theological Course.

## 7.—HONORARY DEGREES.

The powers of the Senatus Academicus to grant Honorary Degrees are regulated by Ordinance No. 41 of the Universities Commission (1889) of date 13th December, 1893, which received the approval of Her Majesty in Council on 28th May, 1894.

**Degree of Doctor of Divinity.**

The following are the regulations for the Degree of D.D. :—

I. At the commencement of every session, the Senatus Academicus in each University shall appoint a committee, to be called the Committee on the Degree of Doctor of Divinity, consisting of the Principal, three Professors from the Faculty of Theology (of whom the Professor of Divinity shall be one), and three other Professors to be selected by the Senatus Academicus from the other Faculties.

II. It shall be the duty of this committee to select persons to be recommended to the Senatus Academicus for the degree; but the committee shall not entertain applications from or on behalf of persons desirous of receiving the degree.

III. The committee shall present a reasoned report, embodying its recommendations to the Senatus.

IV. In the case of every person recommended for the degree, the report shall contain a statement of the grounds on which the recommendation is founded, specifying such particulars as the Senatus may from time to time require.

Under this regulation the Senate requires the following particulars to be specified, viz. :—

- (a) Whether he is an alumnus of this University, and whether he already holds the Degree of B.D., or any other University Degree.
- (b) Whether he has published a contribution of merit to Theological Literature.
- (c) Whether his character and professional standing are such as to warrant the conferring of the proposed distinction.

V. No resolution to confer the Degree of Doctor of Divinity shall be moved in the Senatus except upon special notice given after a fortnight has elapsed from the date when the report of the committee shall have been presented.

**Degree of Doctor of Laws.**

The following are the regulations for the Degree of LL.D. :—

I. At the commencement of every session, the Senatus Academicus in each University shall appoint a committee, to be called the Committee on the Degree of Doctor of Laws, consisting of the Principal and such Professors selected from the various Faculties as the Senatus Academicus may determine, provided that the total number of the committee shall not exceed twelve.

II. It shall be the duty of this committee to select persons to be recommended to the Senatus for the degree, but the committee shall not entertain applications from or on behalf of persons desirous of receiving the degree.

III. The committee shall present to the Senatus a reasoned report embodying its recommendations.

IV. In the case of every person recommended for the degree, the report shall contain a statement of the grounds on which the recommendation is founded, specifying such particulars as the Senatus may from time to time require.

Under this regulation the Senate requires the following particulars to be specified, viz. :—

- (a) Whether he is an alumnus of this or any other University, and whether he already holds any academical degree.
- (b) Whether he is the author of any work of acknowledged merit, or has otherwise contributed to the progress of learning and science.
- (c) And, in general, whether his character, profession, and position in society are such as to warrant the conferring of the proposed distinction.

V. No resolution to confer the Degree of Doctor of Laws shall be moved in the Senatus except upon special notice given after a fortnight has elapsed from the date when the report of the committee shall have been presented.

### Academic Dress.

#### GRADUATES OF THE UNIVERSITY.

On ceremonial occasions the graduates are expected to appear in the Gown and Hood proper to their degrees.

The ordinary Gowns to be worn by graduates of the University of Glasgow are of black silk or stuff, of similar shape to those appropriated to the corresponding degrees in the other British Universities.<sup>1</sup>

The full-dress Gowns to be worn by Doctors are of scarlet cloth, faced in each case with silk of the colour prescribed for the lining of the Hood proper to the degree.

The Hoods for the different degrees are as follows :—

B.A., Black Silk, bordered inside with Red Purple Silk (colour of Bell Heather—*Erica Cinerea*).

M.A., Black Silk, lined with Red Purple Silk.

D.Phil., Scarlet Cloth, lined with reddish Purple Silk.

D.Litt., Scarlet Cloth, lined with bluish Purple Silk.

B.Sc., Black Silk, bordered with Scarlet Cloth and lined with Gold Coloured Silk (colour of Whin Blossom—*Ulex Europæa*).

D.Sc., Scarlet Cloth, lined with Gold Coloured Silk.

B.L., Black Silk, with an inside border of Venetian Red Silk (colour of Clove Carnations).

LL.B., Black Silk, bordered with Scarlet Cloth and lined with Venetian Red Silk.

LL.D., Scarlet Cloth, lined with Venetian Red Silk.

M.B. and C.M., Black Silk, bordered with Scarlet Cloth and lined with Scarlet Silk.

<sup>1</sup> The Robemakers to the University have standard patterns of the gowns, which, it may be stated for the information of those at a distance, are of the same shape with the ordinary (or undress) gowns of the corresponding degrees at Cambridge.

M.D., Scarlet Cloth, lined with Scarlet Silk.

B.D., Black Silk, bordered with Scarlet Cloth and lined with a light Cherry Silk.

D.D., Scarlet Cloth, lined with White Silk.

#### UNDER-GRADUATES.

By a Statute of the Commissioners appointed by the Act, 1690, chapter XVII., of the Parliament of Scotland, "for the Visitation of Universities and Schools," it was enacted that "all the students in the several Universities and Colleges within this kingdom be obliged to wear gowns during the time of the sitting of the Colleges," and that "the Regents or Masters be obliged to wear black gowns, and the students red gowns; and, in regard that wearing of gowns has never been the custom in the College of Edinburgh, the Commissioners do therefore recommend to the Masters of that College to endeavour to bring the custom of wearing gowns there into practice." It appears from the University records that the wearing of red gowns had been previously the practice in Glasgow, and it continued to be the practice in all the Arts classes which existed at the date of this statute uninterruptedly till recently.

The General Council of this University having requested the University Court to recommend to the Senate the propriety of requiring the students to conform to the ancient practice of this University as to academic dress; and the University Court having remitted the subject to the determination of the Senate, with an expression of regret that the academical dress formerly worn by the Arts students has of late years been laid aside, the Senate has given notice that the proper academic dress for students in Arts is the red gown.

While this notice does not apply to students not in the Faculty of Arts, all students in the University are entitled to wear the red gown. Students may wear on the red gown a trimming distinctive of their faculty. The trimming approved for this purpose is a narrow silk band of the colour of the hood-lining proper to the degree of Bachelor in the Faculty, placed over the seam which crosses the breast of the gown on each side.

#### CEREMONY OF GRADUATION.

The following are the regulations adopted by the Senate :—

All degrees honorary or gained by examination, shall be publicly conferred, except in special cases to be decided by the Senate.

Candidates for graduation are required to appear in black gowns with the hoods appropriate to their degrees; those who are already graduates, in the costume proper to their previous degree.

At graduation ceremonies members of the Senate who are Doctors should wear the hood of their degree over either the ordinary or the full-dress gown.

## X.—BURSARIES, SCHOLARSHIPS, Etc., PRIZES.

N.B.—No alumnus of the University is allowed to hold at one time more than one Bursary, Scholarship, or Fellowship, except in cases provided for by the Regulations.

In the case of Bursaries in the gift of the Senate, in appointing to which "a preference" is to be given to certain names, etc., by a "preference" the Senate understand, in every instance, a preference *ceteris paribus*.

The following is the general ordinance issued by the Universities Commission with regard to Bursaries, Scholarships, and Fellowships, which have taken effect prior to the 30th day of August, 1864:—

### ORDINANCE NO. 57 (GENERAL, NO. 19.—REGULATIONS AS TO BURSARIES, SCHOLARSHIPS, AND FELLOWSHIPS).

#### GENERAL.

I. For the purposes of this ordinance, bursaries in the Faculty of Arts (hereinafter referred to as bursaries in Arts) shall be deemed to be the bursaries now attached to the said Faculty by Deed of Foundation or by custom.

II. Bursaries in Arts heretofore tenable for four years shall continue to be so tenable, provided that, if the holders graduate after the three years' course, they shall only retain their bursaries during the fourth year of tenure if they shall engage in a course of study approved by the Senatus Academicus in subjects included in the curriculum for Degrees in Arts or in Pure Science.

III. All bursars in Arts, subject to the provision as to the fourth year of tenure contained in the immediately preceding section, shall attend in each year at least two classes qualifying for graduation in Arts, and shall duly perform the work of these classes: Provided (1) that, for the purposes of this section, the classes known as Middle Classes, so long as the same exist, may be attended in place of classes qualifying for graduation; and (2) that it shall be in the power of the Senatus Academicus, with the approval of the University Court, to permit such bursars as they shall from time to time select to attend classes qualifying for graduation in Pure Science in place of classes qualifying for graduation in Arts.

IV. It shall be in the power of the Senatus Academicus to suspend or deprive a bursar, scholar, or fellow on the ground of misconduct, or, if it think fit, on the ground of his failure to obtain class certificates or to produce such other evidence as may be required that he is prosecuting his studies in a manner satisfactory to the Senatus Academicus.

V. Bursaries in Divinity heretofore tenable for four years shall continue to be so tenable, provided that, if the holders graduate after the three years' course, they shall only retain their bursaries during the fourth year of tenure if they shall engage in a course of study in Divinity approved by the Senatus Academicus.

VI. In the case of a bursary, scholarship, or fellowship, not in the gift of a patron, becoming vacant by forfeiture or otherwise before the expiry of the period of tenure, it shall be in the power of the Senatus

Academicus, with the approval of the University Court, to determine as to the disposal thereof, or of the income thereof, during the remainder of the said period.

VII. Any bursary tenable in several Faculties successively shall not be attached to any one of such Faculties in any year other than a year in which in ordinary rotation it would have been attached to such Faculty.

VIII. It shall be in the power of the Senatus Academicus to require, as a condition of tenure, any holder of a scholarship or fellowship who is a graduate to engage in teaching within the University or to conduct tutorial classes, unless he shall satisfy the Senatus Academicus that he is pursuing special higher studies, or that he is engaged in original research.

IX. Each Examiner at competitions for bursaries, scholarships, or fellowships shall receive suitable remuneration, and it shall be in the power of the University Court to charge the funds of bursaries, scholarships, or fellowships with the necessary expenses of examination.

#### OPEN BURSARIES.

X. (1) The subjects of the examination for open bursaries in Arts of the first year shall be the subjects prescribed for the Preliminary Examination in Arts instituted by Ordinance No. 11 (General, No. 6—Regulations for Degrees in Arts), Section III. The examination shall be taken at the Spring or the Autumn Preliminary Examination, according as the University Court shall determine, and shall be upon the same papers: Provided that the Senatus Academicus may, for purposes of competition, subject candidates to any further test that may be deemed necessary.

(2) Candidates for such bursaries who select in the Bursary Competition Examination, Latin, Greek, or Mathematics, shall, for the purposes of the competition, take the papers of the higher standard in those subjects: Provided that nothing herein contained shall prevent a candidate passing the Preliminary Examination if he complies with the provisions of Ordinance No. 11 (General, No. 6.—Regulations for Degrees in Arts), and Ordinance No. 44 (General, No. 16.—Regulations for Degrees in Arts Supplementary to Ordinance No. 11).

(3) No candidate shall, except as hereinafter provided, obtain a bursary in Arts who shall not have passed the Preliminary Examination in Arts: Provided that it shall be in the power of the Senatus Academicus, with the approval of the University Court, to admit to a bursary in Arts a candidate who shall have passed in at least three subjects of the Preliminary Examination, on the condition that he shall not retain the bursary unless he shall have passed in all the subjects not later than the Second Preliminary Examination after the date of his admission as bursar: Provided also that this power shall lapse after the expiry of seven years from the date hereof unless it be renewed by ordinance.

XI. It shall be competent for the Senatus Academicus, with the approval of the University Court, from time to time to make regulations as to the conditions under which persons shall be eligible to compete for bursaries of the first year in the Faculties of Arts and

Science: Provided always that no student, who has during a winter or summer session attended any class qualifying for graduation in the said Faculties in any Scottish University, shall be eligible to compete for such bursaries.

XII. (1) In determining the marks to be assigned to the several subjects of the Bursary Competition Examination, English, Latin, Greek, and Mathematics shall each have assigned to them double the marks assigned to any other subject.

(2) Candidates may select not more than five subjects for examination from the subjects of the Preliminary Examination in Arts, and no candidate shall be credited with marks in any subject in which he has not obtained such proportion of the total number of marks assigned to that subject as the Senatus Academicus may from time to time prescribe.

XIII. The Senatus Academicus, in determining the results of the Bursary Competition Examination, may award bursaries in Arts of the first year in respect of exceptional distinction in any one branch of study: Provided that this power shall not be exercised with regard to more than two bursaries in any one year.

XIV. Bursaries open for competition to students entering on their first session of attendance in the Faculty of Medicine shall be tenable only by those students who have passed the Preliminary Examination in Medicine, or who have been exempted therefrom in accordance with the provisions of Section VI. of Ordinance No. 46 (St. Andrews, No. 4.—Regulations for Degrees in Medicine), Ordinance No. 14 (Glasgow, No. 1.—Regulations for Degrees in Medicine), Ordinance No. 15 (Aberdeen, No. 1.—Regulations for Degrees in Medicine), or Ordinance No. 16 (Edinburgh, No. 1.—Regulations for Degrees in Medicine), and who have not attended any class qualifying for graduation in Medicine: Provided always that the last-mentioned condition shall not be held to exclude a candidate who may have attended the class of Physics, Chemistry, Botany, or Zoology, otherwise than as part of a graduation course in Medicine.

#### RESTRICTED AND PREFERENTIAL BURSARIES.

XV. Candidates for bursaries in Arts which are not awarded by open competition shall present themselves for the Preliminary Examination in Arts prescribed by Ordinance No. 11 (General, No. 6.—Regulations for Degrees in Arts), Section III., and no bursary shall, except as hereinafter provided, be awarded to any candidate who shall not have passed the Preliminary Examination in Arts: Provided that it shall be in the power of the Senatus Academicus, with the approval of the University Court, to admit to a bursary in Arts not awarded by open competition a candidate who shall have passed in at least one subject of the Preliminary Examination, on the condition that he shall not retain the bursary unless he shall have passed in all the subjects not later than the Second Preliminary Examination after the date of his admission as bursar.

XVI. In the case of a bursary, scholarship, or fellowship in the gift of a patron, including bodies corporate and not corporate, becoming



vacant by forfeiture or otherwise during the period of tenure, the Senatus Academicus shall forthwith give notice of the vacancy to the patron, who may, within such time as the Senatus shall fix, appoint a qualified student to fill the vacancy; and if he fail to do so within such time, the Senatus Academicus may select a deserving student to fill the vacancy until the next Preliminary Examination at which bursaries are awarded, when the patron's right to present shall revive.

XVII. On the occurrence of a vacancy in any bursary in the gift of a patron, including bodies corporate and not corporate, at the expiry of the period of tenure, the Senatus Academicus shall give notice of such vacancy to the patron of the bursary and of the date fixed for the Preliminary Examination next ensuing at which bursaries are awarded; and the patron may, if he think fit, submit to the Senatus the names of two or more candidates eligible for such bursary, who shall undergo an examination to be conducted by the Examiners for open bursaries in the University, and the result of the examination shall be communicated to the patron for his information, who shall thereafter present to the bursary.

XVIII. In the case of a bursary in the gift of a patron, including bodies corporate and not corporate, if no qualified person be presented before the date of the Preliminary Examination intimated in terms of the immediately preceding section, the bursary shall be open to unrestricted competition for that year; and in the event of no qualified person being presented as before provided at the beginning of the next academical year, the Senatus may either throw open the bursary to unrestricted competition, or continue the same to the student to whom it had previously been awarded: Provided that this section shall not apply in cases where the patron shall previously satisfy the Senatus Academicus that proper arrangements have been made for the selection of a bursar.

#### MISCELLANEOUS.

XIX. In the case of bursaries designed for poor students, the Senatus Academicus shall satisfy itself that the circumstances of candidates are such as to entitle them to the benefit of the endowment, and for this purpose the Senatus may require that a declaration be made by a parent or guardian, or by the minister of religion or schoolmaster, of each candidate as the Court shall think fit.

XX. [Preferences and restrictions cancelled. These have been noted under each bursary concerned.]

XXI. Nothing herein contained shall apply to any bursary or endowment granted by any incorporation or society whose funds, capital or revenue, have been and are contributed and paid by the members of such incorporation or society by way of entry monies or other fixed or stated contributions.

XXII. The Senatus Academicus, with the approval of the University Court, shall prescribe the subjects of examination and the conditions of competition for bursaries, scholarships, or fellowships, in so far as the same are not prescribed by ordinance or by deed of foundation.

XXIII. The provisions of any Ordinance of the Commissioners under

the Universities (Scotland) Act, 1858, in so far as inconsistent with the provisions of this ordinance, are hereby repealed.

XXIV. This ordinance shall come into force from and after the 1st day of January, 1895, or as soon thereafter as it may be approved by Her Majesty in Council: Provided that nothing herein contained shall extend to, or affect the interests of, any person holding a bursary, scholarship, or fellowship at the date of its coming into effect. [Issued on 30th July, 1894; approved on 11th May, 1895.]

#### BURSARIES FOR WOMEN.

On 10th March, 1898, the University Court, in virtue of the power conferred by Ordinance No. 58, Section 1., resolved to appropriate to competition, without restriction as to sex, all the open bursaries tenable in Arts, Science, or Medicine, which have taken effect prior to 30th August, 1864. To a number of other Bursaries either men or women may be appointed. In the following lists of Bursaries arranged according to Faculties, *italics* are used in printing the names of those Bursaries for which both men and women are eligible.

#### A.—BURSARIES ARRANGED ACCORDING TO FACULTIES.

##### BURSARIES IN THE FACULTY OF THEOLOGY.

Bursars in the Faculty of Theology are required to attend each session the Divinity Class and any two of the three classes of Hebrew, Church History, and Biblical Criticism.

FOUNDATION.	No. of Bursaries.	Period of Tenure.	Approximate Annual Value of each.
		Years.	
Adam, John, - - - - -	3	4	£18
Black, - - - - -	2	3	£38
Boyd and Sanders, - - - - -	1	3	£13 16/8
Boyd and Wilson, - - - - -	1	3	£24 6/8
Brown or Ettles, - - - - -	2	3	£28
Dundonald, - - - - -	6	3	£41 2/6
Gilhagie and Struthers, - - - - -	1	3	£19 12/8
Hamilton, - - - - -	3	3	£25
Hastie, - - - - -	2	3	£26
Logan, - - - - -	1	3	£17
Lorimer, - - - - -	4	3	£24 and £16
Lumsden, - - - - -	1	4	£15
Macfarlane, James, - - - - -	1	3	£25
Marshall, - - - - -	1	4	£16
Morgan, - - - - -	8	1	£20
Muir, - - - - -	1	3	£32
Muir Divinity, - - - - -	2	2	£25
Notman, - - - - -	1	3	£18
Ross, John, jun., - - - - -	1	3	£32
King William's, - - - - -	2	3	£20

##### BURSARIES IN THE FACULTY OF LAW.

Cunninghame, Andrew, - - - - -	2	1	£35
Macfarlane, Robert, - - - - -	3	3 and 1	£27
Merchants' House, - - - - -	1	3	£25
Robertson, R. W., - - - - -	1	1	£30
Walkinshaw-Young, - - - - -	1	2	£16
Major Young's Fund, - - - - -	2	6 and 2	£22

## BURSARIES IN THE FACULTY OF MEDICINE.

FOUNDATION.	No. of Bursaries.	Period of Tenure.	Approximate Annual Value of each.
		Years.	
Arthur, <sup>1</sup> - - - - -	1	3	£20
Brisbane. - - - - -	1	4	£40
Davidson, - - - - -	1	3	£32
Gardiner, <sup>2</sup> - - - - -	1	2	£14
Gibson, Dr. Thomas, <sup>2</sup> - - - - -	1	4	£36
Glasgow Highland Society, - - - - -	7	4	£25
Logan, <sup>2</sup> - - - - -	1	4	£17
Lorimer, - - - - -	4	3	£24 and £16
Macarthur, - - - - -	1	2	£20
Macfarlane, John, - - - - -	1	3	£40
Mackintosh, <sup>2</sup> - - - - -	1	1	£31
Marshall, - - - - -	1	4	£16
Merchants' House, - - - - -	2	4	£25
Monteith, John, - - - - -	2	2	£21
Paterson, James A., - - - - -	8	4	£25 and £20
Rainy, - - - - -	2	2	£20
Walton, - - - - -	1	4	£34
Weir, Andrew, - - - - -	1	1	£16

## BURSARIES IN THE FACULTY OF SCIENCE.

Agricultural College, - - - - -	5	4	£40 and £35
Cuthbertson, Donald, - - - - -	1	3	£32
Kerr, Malcolm, - - - - -	2	3	£22
M'Ewen, Malcolm (Arts or Science), - - - - -	1	4	£16
Metcalf, - - - - -	4	2	£25
Muir (Civil Engineering), - - - - -	2	1	£12 10/
Pender Memorial, - - - - -	1	1	£52
Shipwrights' Company, - - - - -	1	3	£50
Strang, - - - - -	4	3	£20
Young, George, - - - - -	1	1	£35

## BURSARIES IN THE FACULTY OF ARTS.

Bursars in the Faculty of Arts are required to attend at least two classes each session.

Adam, James, - - - - -	2	4	£11
Adamson, - - - - -	1	3 or 4	£20
Barbour (Kilbarchan), - - - - -	1	3	£20
Biggart Memorial, - - - - -	10	4	£25
Black, - - - - -	2	4	£19
Blackquarry School, - - - - -	1	4	£12
Brand, - - - - -	3	4	£27
Brown, Ebenezer, - - - - -	1	3	£38
Browne (Ayrshire), - - - - -	2	4	£22
Brown-Paton, - - - - -	2	3	£16
Buchanan, <sup>2</sup> - - - - -	2	3	£13
Clark, John (Mile-end), <sup>2</sup> - - - - -	24	4	£30
Cowan, - - - - -	1	3	£26 13/4
Craig, - - - - -	1	4	£25
Craig, Archibald, <sup>2</sup> - - - - -	1	2	£9

<sup>1</sup> Open to women students only.

<sup>2</sup> Both men and women are eligible.

BURSARIES IN THE FACULTY OF ARTS—*Continued.*

FOUNDATION.	No. of Bursaries.	Period of Tenure.	Approximate Annual Value of each.
		Years.	
<i>Craefurd and Brown</i> , <sup>1</sup>	1	4	£19 13/4
Davidson, - - - - -	1	3	£32
Duncan's Bute, - - - - -	2	4	£35
Dundonald, - - - - -	8	4	£40
Ewing, James, - - - - -	4	4	£20
Forfar, <sup>1</sup> - - - - -	5	4	£36
Forrester, <sup>1</sup> - - - - -	1	3	£24
Foundation, <sup>1</sup> - - - - -	2	4	£20
Franco-Scottish Society, <sup>1</sup> - - - - -	4	1	£30
Fullarton of Overton, - - - - -	5	2	£22
Gardiner, <sup>1</sup> - - - - -	1	2	£14
Gartmore, <sup>1</sup> - - - - -	1	3	£21
General Council, <sup>1</sup> - - - - -	4	3 or 2	£20
Glasgow City Educational Endow'mts., <sup>1</sup>	20	4 or 2	£25
Grant, George, <sup>1</sup> - - - - -	1	3 or 4	£38
Grant, George, jun., <sup>1</sup> - - - - -	1	4	£38
Hamilton, - - - - -	3	3	£20
Hamilton Educational Trust, <sup>1</sup> - - - - -	3	3	£20
Hannay, - - - - -	3	3	£15
Hastie, <sup>1</sup> - - - - -	1	4	£26
Highland Society, Glasgow, <sup>1</sup> - - - - -	12	4	£20
Hill, <sup>1</sup> - - - - -	2	3	£15
Howison and Gilehrst, - - - - -	1	4	£10
Hutchesons' Educational Trust, - - - - -	20	4	£20
Hyndford and Ross, - - - - -	1	4	£10 16/8
Jaffrey, John Ferguson, - - - - -	1	2	£34
Kerr, Malcolm (Nat. Phil.), - - - - -	1	3	£22
Laing, Alexander, - - - - -	1	3	£20
Laing, James, <sup>1</sup> - - - - -	8	4	£25
Lanfinc, <sup>1</sup> - - - - -	6	2	£27
Leadbetter, - - - - -	1	4	£9
Leyden, John, - - - - -	1	3	£13
Lochhead, James, - - - - -	1	3	£16
Lochhead and Mitchell, - - - - -	2	4	£33
Lorimer (Phil.), - - - - -	4	3	£24 and £16
Lorimer (Math.), <sup>1</sup> - - - - -	4	3	£24 and £16
Lusk, - - - - -	1	3	£35
M'Crie, - - - - -	4	4	£25
M'Culloch, - - - - -	1	4	£18
MacDougall, - - - - -	3	3	£33
M'Ewen, Malcolm (Arts or Science), - - - - -	1	4	£16
M'Farlane, Robert (Arts or Law), - - - - -	1	3	£27
MacGrouther, - - - - -	2	4	£20 and £15
M'Kissack, - - - - -	1	4	£20
Maclean Trust, <sup>1</sup> - - - - -	4	4	£25
Maitland Club, - - - - -	1	—	—
Manderson, Alexander, <sup>1</sup> - - - - -	1	3	£15
Marshall Trust, <sup>1</sup> - - - - -	20	5	£30
Meiklejohn, William, - - - - -	1	4	£20
Menzies, - - - - -	4	4	£45
Merchants' House, - - - - -	1	4	£25

<sup>1</sup> Both men and women are eligible.

BURSARIES IN THE FACULTY OF ARTS—*Continued.*

FOUNDATION.	No. of Bursaries.	Period of Tenure.	Approximate Annual Value of each.
		Years.	
Monteith, - - - - -	3	3	£14
Morgan, - - - - -	16	1	£20
Muir (Mathematics, Senior), - - -	1	1	£16
Muir (Mathematics, Junior), - - -	1	2	£8
Paterson, James, - - - - -	1	4	£20
Paterson, James, - - - - -	1	3	£20
Paterson, James A., - - - - -	8	3	£30, £20, and £10
Patrick, - - - - -	3	4	£32
Perthshire Society, - - - - -	1	3	£25
Pollock, - - - - -	3	3	£37
Ramsay-Walker, - - - - -	2	4	£12
Scott ( <i>Sir Walter</i> ), <sup>1</sup> - - - - -	3	4	£25
Stevenson of Dalry, - - - - -	2	4	£33
Stewart, A. & B., <sup>1</sup> - - - - -	7	4	£20
Stewart, <sup>1</sup> - - - - -	3	4	£15
Thomson, James (Philosophical), -	1	2	£10
King William's, <sup>1</sup> - - - - -	2	3	£15

## BURSARIES IN THE FACULTIES OF ARTS AND THEOLOGY.

Ardkinglass, - - - - -	1	6	£9 10/
Buchanan (Bellfield), - - - - -	2	7	£47
Leighton, - - - - -	1	3	£18
Williams, - - - - -	4	3 or 4	£40

## BURSARY IN THE FACULTIES OF ARTS OR THEOLOGY.

Lamb, <sup>1</sup> - - - - -	1	—	£12
Simson, - - - - -	1	—	£18

## BURSARIES IN THE FACULTIES OF LAW OR MEDICINE.

Stewart, A. & B., <sup>1</sup> - - - - -	4	3	£50
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## BURSARIES IN THE FACULTIES OF ARTS, LAW, OR MEDICINE.

Macdonald, - - - - -	2	4	£16
William Whyte, - - - - -	4	4	£25

## BURSARIES IN THE FACULTIES OF THEOLOGY, LAW, OR MEDICINE.

Armagh, <sup>1</sup> - - - - -	3	3	£48
Bell, - - - - -	—	—	£50
Hutcheson, Thomas, - - - - -	1	4	£11 2/23

## BURSARIES IN ANY FACULTY.

Ayrshire Society, <sup>1</sup> - - - - -	4	3	£15
Denny, <sup>1</sup> - - - - -	4	4	£30
Dumfriesshire Society, <sup>1</sup> - - - - -	2	4	£15
Ferguson, James, - - - - -	2	2	£95
Forrest, - - - - -	5	5 or less	£22
Gibson, John, - - - - -	2	3	£20
Kintyre (Ker), - - - - -	1	3	£20
Kintyre (Alexander Love), - - -	1	4	£11
M'Kechnie, - - - - -	2	4	£35
Pratt, <sup>1</sup> - - - - -	2	4	£20
Shearer, - - - - -	3	3	£30
Smith, - - - - -	1	4	£18
Stillie, <sup>1</sup> - - - - -	1	1	£5
Taylor, <sup>1</sup> - - - - -	2	4	£7

<sup>1</sup> Both men and women are eligible.

**B.—BURSARIES (ALPHABETICALLY ARRANGED).**

**JAMES ADAM BURSARIES (*Arts*).**—These bursaries were founded by the Rev. James Adam, Minister of Cumbrae, who died in 1830, and were originally three in number. In appointing to one of the bursaries, preference was given to the kindred of the founder, and in appointing to another to students of the name of Adam. By Ordinance No. 80 of the Universities Commission (1889) these restrictions were removed, and the three bursaries were combined into two of equal value. The bursaries are tenable for four years, but if a bursar graduate at the end of three years he shall only retain his bursary during the fourth year of tenure if he shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. In other respects the provisions of Ordinance No. 57 apply to these bursaries. The appointment is vested in the Earl of Glasgow, the Professor of Divinity, and the Minister of Cumbrae, the exercise of their patronage being regulated by Ordinance No. 57, Sections xv.—xviii. Value, about £11 per annum each.

*Bursars*—James B. Gordon, 1905 ; Ernest Evans, 1906.

**JOHN ADAM BURSARIES (*Theology*).**—Three in number, founded by Mr. John Adam, of the Inner Temple, who died in 1836. The founder gave a preference to his own kindred and to students of the name of Adam or Dollar. By Ordinance No. 57 of the Universities Commission (1889) this preference was cancelled. They are open to competition to students in Theology of the first year ; and, after examination, are adjudged to the three students who shall be declared to be the most deserving, and to have made the highest attainments in Latin, Greek, Logic, Moral and Natural Philosophy, and Mathematics. The trustees and patrons are the Principal, the Professor of Theology, and the five Professors of the Gown Classes. These Bursaries are tenable for four years, subject to the provisions of Ordinance 57, Section v. Value, £18 to each bursar. (One vacancy).

*Bursars*—Hugh C. McColl, 1904 ; John A. Steele, 1906.

**ADAMSON BURSARY (*Arts*).**—This Bursary was founded by the Rev. David Adamson, minister of Fintry, in 1674, for a student in Philosophy, and was restricted to sons of freemen in one of the seven Incorporate Trades of Stirling. This restriction was removed by Ordinance No. 57 of the Universities Commission (1889). The Bursary is tenable for four years by a student entering the Greek Class, for three years by a student entering the Logic Class ; and the appointment is vested in the Convener Court of Stirling. Value, the free proceeds of the capital, which now amounts to about £500.

*Bursar*—David Bennett, 1904.

**AGRICULTURAL COLLEGE BURSARIES (*Science*).**—The Governors of the West of Scotland Agricultural College have instituted a scheme of Bursaries, of the value of £40 and £35 respectively, each tenable for four years. They are awarded on the results of the Science Preliminary Examination held in Autumn. Bursars must attend the curriculum of classes in Glasgow, and comply with the conditions required to qualify for the degree of B.Sc. in Agriculture of the University of Glasgow, and must further present themselves at the examinations for the National Diploma in Agriculture. Further particulars may be ascertained by applying to Principal Wright, 6 Blythswood Square, who will receive applications up to 1st September. (Two vacancies.)

*Bursars*—John Brown (£40), 1904; John Dunlop (£35), 1904; Renwick Leitch (£40), 1905 (four years); Daniel G. O'Brien, (£40), 1906; Douglas L. Cowan, (£35), 1906.

**ARDKINGLASS BURSARY (*Arts and Theology*).**—This Bursary was founded in 1733, by Sir James and Lady Campbell, out of a fund which Colonel John Blackader of Barndennoch, Glencairn, Dumfriesshire, had by his Will set aside for pious uses, and was tenable for eight years—five in Languages and Philosophy, and three in Divinity. It is now regulated by Ordinance No. 87 of the Universities Commission (1889). A bursar may hold the Ardinglass Bursary for three years in the Faculty of Arts, and for three years in the Faculty of Divinity, and no longer; but a bursar, who at the end of the third year of his tenure has failed to pass all the examinations necessary for graduation in Arts, shall forfeit the Bursary, and in that event it shall be lawful for the patron to nominate a candidate, who shall be a Master of Arts, or shall have passed the examinations necessary for admitting him to that Degree, and shall be entering on his course of study in the Faculty of Divinity; failing such nomination by the patron, the Bursary shall be awarded by the Senate to a candidate qualified as aforesaid, under such conditions as the Senate shall prescribe, but a Bursar thus nominated shall not hold the Bursary for more than three years. In other respects the provisions of Ordinance No. 57 apply to the Ardinglass Bursary. Patron, Mr. George F. W. Callander of Ardinglass and Craigforth. Value, £9 10s. (Vacant.)

**ARMAGH BURSARIES (*Theology, Law, or Medicine*).**—Three in number, founded in 1733 by Hugh Boulter, Archbishop of Armagh, who endowed the College with the annual rent of certain lands in the neighbourhood of Glasgow. By ordinance of the Universities Commission (1858) these three Bursaries were raised from £15 to £25 per annum each (the funds having accumulated through vacancies), and the restrictions as to birthplace were removed.

Further regulations were laid down in Ordinance No. 92 of the Universities Commission (1889). The Bursaries are now each of the annual value of £48, and are open by competition to students who are presenting themselves for the final examination for the Degree of Master of Arts with Honours in the following rotation: (1) Classics, (2) Mental Philosophy, (3) Mathematics and Natural Philosophy. They are tenable for three years, during which the holders must give regular attendance on the classes of this University, as students of Theology, Law, or Medicine. In other respects the provisions of Ordinance No. 57 apply to the Bursaries on this Foundation. In October, 1907, one Bursary, tenable for one year, will be open to competition, the subject of examination being Classics; and one, tenable for three years, the subject of examination being Mathematics and Natural Philosophy.

*Bursars*—<sup>1</sup>Andrew Henderson (Math. and Nat. Phil.), 1904; <sup>2</sup>James C. M. Fairlie (Classics, two years), 1906; George R. Robertson (Mental Philosophy), 1906.

ARTHUR BURSARY OR SCHOLARSHIP (*Medicine*).—Founded in 1892 by Mrs. Arthur of Barshaw. This Bursary is at present of the annual value of £20. It is open to women students in the Medical School at Queen Margaret College. It is to be awarded by the Trustees to the student who shall take the highest place among the Queen Margaret College candidates at the First Professional Examination held in the University before the commencement of the winter session in which an appointment falls to be made, provided always that a candidate may take part of her examination in the March or April preceding. If two students are of equal merit, the Bursary will be divided between them, and if more than two are equal, a special examination may be held to determine who shall be the recipient. The Bursary is tenable for three years, subject to the condition that the Bursar prosecute her medical studies with the approval of the Trustees.

*Bursar or Scholar*—<sup>1</sup>Jessie C. Russell, 1904.

GLASGOW AYRSHIRE SOCIETY'S BURSARIES (*Any Faculty*).—Four in number, founded in 1868 and 1879 by the Glasgow Ayrshire Society, and consisting of the free annual proceeds of a sum of £1,501 11s. subscribed by members of the Society, to be devoted to the establishment of bursaries in the University of Glasgow, and invested for that purpose. The bursaries, which are at present £15 per annum each, are tenable for not more than three years, and are open to applicants of either sex between the ages of 14 and 24, who are descendants of members of the Society, or natives of Ayrshire, or sons or daughters of natives resident in Glasgow, who are in

<sup>1</sup> Vacant through lapse of time.

<sup>2</sup> Bursar appointed to a Fellowship.



circumstances rendering the aid of a bursary necessary or desirable. Patrons—the Directors and Office-bearers of the Society. Secretary, Mr. Alexander M'Lennan, 92 St. Vincent Street, Glasgow.

*Bursars*—John Talman, 1905; Thomas M'Vittie, 1905; Joseph Dunbar, 1906; Elizabeth F. Stevenson, 1906.

**BARBOUR KILBARCHAN BURSARY (Arts).**—Founded in 1887 by the Executors of Miss Mary Barbour of Plymouth Grove, Manchester, who bequeathed £500 free of legacy duty for the purpose of endowing a scholarship for the Board School of Kilbarchan, Renfrewshire. The bursary is open to students of the first year, and is tenable for three years. Candidates must not exceed the age of eighteen years, must produce a certificate from the Kilbarchan School Board that they have attended three years at the Kilbarchan Village or Town Board School, are of irreproachable character, and have given satisfactory evidence of good natural ability, diligence and proficiency in their studies, and must be examined at the ordinary Bursary Examination.

*Bursar*—Alexander M'Crorie, 1906.

**BELL BURSARIES.**—Mrs. Mary Allan Bell, of Nether Culzeau, Maybole, who died on 7th February, 1899, at Glenae, Dumfries, in her Trust Disposition and Settlement of date 21st October, 1895, directed her Trustees, after the death of her husband, to apply the income of the residue of her estate in perpetuity in providing bursaries of £50 each for necessitous deserving students of Medicine, Law, or Theology in this University. Only those who have gone through the Arts curriculum are to be eligible, with a preference, *ceteris paribus*, first to the name Turnbull, and next to the name Macdowall. The Bursaries are to be awarded by competition, the examination being conducted both orally and in writing by two examiners appointed by the Trustees. Each Bursary is to be tenable for three or four years, as the Trustees may decide.

**BIGGART MEMORIAL BURSARIES (Arts).**—Founded in 1876 by Mr. Thomas Biggart of Baidlandhill, Dalry, Ayrshire, in memory of his son, Thomas Biggart, an alumnus of Glasgow University, who died in 1874. The bursaries are open to competition at the annual Bursary and Preliminary Examination to students who are entering on the Arts Course at the University of Glasgow, with a view to the ministry of the United Free Church, and are designed to enable such students more easily to pursue that curriculum and obtain, as far as practicable, the Degree of Master of Arts.

The bursaries are tenable for four years, and the yearly value of each is £25. The Bursary Fund consisted of the sum of £6,000, and the deed of foundation provided that the surplus revenue, if any, may be applied to prolong the tenure of any of the bursars for a fifth year,

or to the granting of additional bursaries on the same conditions as are applicable to the others.

Each bursary is payable by equal moieties on the second day of February and at the close of the winter session; and the bursar, on applying to the Principal for a precept for the second moiety, is required in each year to produce, besides the usual certificate from the Professors, a certificate signed by the Chairman and Clerk of the Theological Committee of the United Free Assembly, to the effect of his being recognised by that Church as an accepted student, pursuing his studies with a view to the ministry therein. (Three Vacancies.)

*Bursars*—<sup>1</sup>Louis C. Phillips, 1903; <sup>1</sup>William A. Murdoch, 1903; Alexander D. Muir, 1904; John V. McLean, 1905; James B. Primrose, 1906; Samuel W. Wilson, 1906.

**BLACK BURSARIES (Arts).**—Founded by Mrs. Janet Black, widow of the Rev. William Black, D.D., Minister of the Barony Parish, Glasgow. Mrs. Black died in 1876, and by her Settlement, made provision, *inter alia*, for the institution of two bursaries in Arts, each of which is now of the annual value of £20. The bursaries are open to competition to students entering on their first session in the University, and are awarded to students who, having passed the Arts Preliminary, have gained the highest marks in Mathematics in the Bursary Examination, and have not obtained a bursary in the general competition. The bursars are required to attend the qualifying courses for a degree in Arts. (One vacancy in 1908.)

*Bursar*—John M. McNeill, 1906.

**BLACK BURSARIES (Theology).**—Founded by Mrs. Janet Black—who died in 1876—in memory of her husband, William Black, D.D., Minister of the Barony Parish of Glasgow. The bursaries are entrance bursaries, two in number, each of the annual value of £40, tenable for three years. The competition is open to candidates holding a degree in Arts in any Scottish University, or who have passed their examinations in any four subjects taken from at least two departments for graduation in Arts. Candidates must be members of the Established Church of Scotland.

*Bursars*—Robert H. Napier, M.A., 1905; Matthew Stewart, M.A., 1906.

**BLACKQUARRY SCHOOL BURSARY (Arts).**—Founded in 1876 by the Trustees of the Blackquarry School, Port-Dundas, Glasgow. The Police Board of Glasgow having acquired the school compulsorily under "The Glasgow Police Acts," the Trustees resolved to apply the proceeds, after payment of all claims upon the institution, in founding a Bursary in the University of Glasgow. The Bursary is

<sup>1</sup> Vacant through lapse of time.

open to competition to Students in the Faculty of Arts on their first entering the University, under the same regulations as those of the competition Bursaries in the University, and is tenable for four years, subject to the condition that the Bursar shall attend the qualifying course for the Degree of M.A. Value, the annual income of a sum of £420 (about £12).

*Bursar*—John T. Black, 1905.

**BOYD AND SANDERS BURSARY** (*Theology*).—In 1635, Mr. Zachary Boyd founded three Bursaries for students in Divinity, tenable for two or four years, each of the value of £5 10s. per annum. The appointment to one of these was vested in the Merchants' House of Glasgow; and the patrons of the other two were the members of the City Council. Preference to burgesses' sons, particularly of the name of Boyd.

The Bursary, value £5 10s., in the gift of the Merchants' House of Glasgow, and the Sanders Bursary, value £8 6s. 8d., founded in 1728 by Mr. Robert Sanders of Auldhouse, also in the gift of the Merchants' House, were, by an order obtained under the authority of the Endowed Institutions Commission in 1880, conjoined into one Bursary of £13 16s. 8d. per annum, tenable for not more than three years by a student attending the ordinary curriculum in the Faculty of Theology at the University of Glasgow. The preference, *cæteris paribus*, to the names Boyd, Sanders, Corbet, Colquhoun, and Wardrop, was cancelled by Ordinance No. 57 of the Universities Commission (1889). When a vacancy occurs applications are to be lodged with Wm. H. Hill, LL.D., Clerk of the Merchants' House, on or before 1st September.

*Bursar*—<sup>1</sup>David G. Milne, 1904.

**BOYD AND WILSON BURSARY** (*Theology*).—By ordinance of the Universities Commissioners of date 17th May, 1862, the two Boyd Bursaries in the gift of the Magistrates and Town Council of Glasgow (see above) were conjoined into one, tenable for three years, the Bursar to be M.A. By an ordinance of the same date the two Bursaries, value £6 13s. 4d. per annum each, which were founded by Mr. Michael Wilson in 1640, and placed under the same patronage, were also conjoined into one, tenable for three years, the holder to be M.A. in regular attendance at the University as a student of Theology. Restrictions as to kindred, etc., were in both cases abolished.

This Boyd Bursary and this Wilson Bursary were, by Ordinance No. 78 of the Universities Commission (1889), conjoined into one Bursary, called the Boyd and Wilson Bursary, value £24 6s. 8d. per annum. The holder must be a Master of Arts of a Scottish University. The Bursary is tenable for three years, provided that

<sup>1</sup> Vacant through lapse of time.

the Bursar shall, during that period, give regular attendance as a student of Theology in Glasgow University. When a vacancy occurs, applications are to be lodged with the Town Clerk, City Chambers, not later than 1st September.

*Bursar*—William Potter, M.A., 1905.

**BRAND BURSARIES (*Arts*).**—Mr. Robert Brand, son of the late Mr. Robert Brand, coalmaster, Wishaw, by his Trust Disposition and Settlement, dated 28th June, 1873, directed his Trustees to pay to the Senatus of the University of Glasgow the sum of £2,000, the income of said sum to be applied in payment of three Bursaries in Arts for the behoof of students in the University who shall be studying with a view to the ministry of the United Free Church. Mr. Brand died on 3rd July, 1873, but, in consequence of litigation, it was not till January, 1875, that the bequest, amounting, with interest, to the sum of £2,121 7s. 5d., was paid by the Trustees to the Senate. The Bursaries, which are tenable for four years, are of the annual value of about £27 each, and are awarded by public competition to students entering their first or second session in the Faculty of Arts; the Bursars to graduate as M.A. at the end of their course.

*Bursars*—<sup>1</sup> Joseph W. Buchanan, 1903; Hector J. W. Hetherington, 1905; John Paterson, 1906.

**BRISBANE BURSARY (*Medicine*).**—Founded by Miss Christian Brisbane in 1777, in fulfilment of the intentions of her brother, Dr. John Brisbane of Balbegno. Their father, Dr. Thomas Brisbane, was the first Professor of Anatomy in this University.

It is tenable by a student of Medicine for four years, and the salary is about £40 per annum. The family of Brisbane and the University present alternately. Candidates must be under twenty-two years of age, and must have the Degree of M.A.

The preference formerly given to the kin of the founder was cancelled by Ordinance No. 57 of the Universities Commission (1889).

*Bursar*—John C. Middleton, M.A., 1904.

**BROWN BURSARY.**—See Crawford and Brown, p. 331.

**BROWN OR ETTLES BURSARIES (*Theology*).**—Two in number, founded in 1867 by Miss Ettles of Inverness, in memory of her brother-in-law, Dr. E. Brown, an alumnus of this University. The Bursaries consist of the annual interest and proceeds of a sum of £1,000, and are open to competition to first year's students of Divinity who have passed all the examinations required for the ordinary Degree of M.A.; with a preference, *ceteris paribus*, to such

<sup>1</sup> Vacant through lapse of time.

as can speak Gaelic. The Bursaries are of value of the annual value of £25, and are tenable for three years.

*Bursary*—William Clark M.A. 1866; William I. Murray M.A. 1896.

**BROWN BURSARY Act.**—Founded in 1866 under the Trust Disposition and Settlement of Mr. Ebenezer Brown, export broker, West Campbell Street, Glasgow. Mr. Brown, who died on 31st July, 1862, bequeathed to the Senate the sum of £1,000, free of legacy duty, for the purpose of founding and maintaining a bursary in the Faculty of Arts, to be granted to the student who shall obtain highest in a competitive examination on such subject or subjects in Arts as the Senate may prescribe. The Senate have full power to vary such subject or subjects from year to year and to lay down such regulations regarding the bursary as they may see fit. The bursary is open to competition to all students entering in their first or second year of attendance, provided that no student in his second year shall be eligible who on entering took his first year of attendance passed the whole Preliminary Examination. It is tenable for three years. Present value, £80 per annum.

*Bursary*—Charles A. Stewart, 1866.

**BROWN ALEXANDER BURSARIES Act.**—Two in number, tenable for four years, and each of the annual value of about £25, founded in 1871 by Mr. Hugh Brown, residing at Irvine, in the county of Ayr, who for this purpose, and in memory of his son-in-law, the late Dr. Alexander Brown, of Brown's Ayr, mortgaged to the University of Glasgow the sum of £1,000. The bursaries are awarded by competition. Candidates must be natives of the county of Ayr, or must have been educated for not less than four years in a school within the said county, and must be entering in their first session at the University.

*Bursaries*—James Robb, 1866; John F. Wren, 1866.

**BROWN-PATER BURSARIES Act.**—Founded in 1861 by Mr. Andrew Brown-Pater, Liverpool, in memory of his father, mother, and three sisters. The bursaries are two in number and are tenable for three years. They are open for competition to students of the first year, with a preference to natives of the parishes of London or Glasgow in Ayrshire. Should no candidate from either of these parishes come up to the standard of the Entrance Examination then two in Arts, the bursaries are open to candidates from any part of Ayrshire. Failing qualified candidates from Ayrshire, the bursaries are open to all students of the first year. In case of a vacancy, otherwise than by lapse of time, a student of the same standing is appointed by the Senate by examination or otherwise. Each bursar receives one half of the free proceeds of the capital sum of £1,000 paid over to the University Court by the founder.

*Bursary*—John Fallowell, 1866; Andrew Inglis, 1866.

**BUCHANAN BURSARIES (*Arts*).**—Founded by the late Robert Buchanan, LL.D., Ardfillayne, Dunoon, formerly Professor of Logic and Rhetoric in the University of Glasgow, by Codicils to his Will, dated 26th December, 1871, and 26th March, 1872, in which, as a “token or expression of his gratitude and respect to the University of Glasgow, with which, as a student, or Professor, or member of the University Court, he had been connected for the space of fifty years,” he bequeathed the sum of £1,000 for the purpose of founding a Bursary or Bursaries for students in the Faculty of Arts, on the conditions that may appear to the Senatus best for the interests of the University. The Senate resolved to apply the annual proceeds to the support of two Bursars in Arts, each to hold his Bursary for three years, subject to the usual condition of attending two of the classes of the curriculum in each session; the Bursars to be appointed by competitive examination among students of either sex of the first year. The Bursaries are awarded to competitors who, having passed the Arts Preliminary, have gained the highest marks in Dynamics in the Bursary examination, and have not obtained a bursary of greater value in the general competition. Present value, £13 to each Bursar.

*Bursars*—<sup>1</sup>James Watson, 1904; John A. Harper (Dynamics), 1905.<sup>2</sup>

**BUCHANAN (BELLFIELD) BURSARIES (*Arts and Theology*).**—Founded in 1875, in accordance with the Trust Disposition and Deed of Settlement of the late Misses Margaret Jane and Elizabeth Buchanan of Bellfield, Glasgow. The Bursaries are two in number, and consist of the yearly proceeds of a sum of £4,200, vested in Reduced 3 per cent. Annuities. Open to matriculated students who may be prosecuting their studies at the University of Glasgow, with a view to their becoming licentiates and clergymen of the Established Church of Scotland. The Patrons are the Principal and such of the Professors as hold their appointments from the University Court. The Bursaries are tenable during the whole curriculum “or such portion thereof as to the said Principal and Professors may seem proper.” The Bursars are appointed by competitive examination among students of the first and second years in Arts. Present value, £47 per annum to each Bursar.

*Bursars*—Alexander B. Harper, 1903; Robert J. Thomson, 1904.

**GEORGE A. CLARK BURSARIES OR SCHOLARSHIPS (*Arts, etc.*).**—(See under “Scholarships.”)

**JOHN CLARK (MILE-END) BURSARIES (*Arts*).**—Founded in 1868, in accordance with the Trust Disposition and Deed of Settlement of the deceased Mr. John Clark, junior, of the firm of John Clark,

<sup>1</sup> Vacant through lapse of time.

junior, & Co., thread manufacturers, Mile-End, Glasgow. By a Deed of Constitution of date 1st August, 1866, the "Clark Bursary Fund" is placed under the management of twelve trustees. The Bursaries are to be at least two in number, of the annual value of £30, open for competition to all Protestant students of good moral character, sons or daughters of Protestant parents, entering on their first session in the Faculty of Arts (a preference, *ceteris paribus*, given to orphans), and are tenable for four years, subject to the condition that the Bursars proceed through the curriculum of Arts in Glasgow University. On 29th October, 1897, the Trustees resolved that it should not be competent for any one appointed after that date to a John Clark (Mile-End) Bursary to hold any other Bursary or Scholarship concurrently with it, except with the consent of the Trustees. The competition is to be in writing, and the trustees are to appoint the subjects of examination. The Bursary fund consists of the residue of the Testator's estate, said residue amounting to upwards of £35,000. Six Bursaries on this foundation will be open to competition in October, 1907; and will be awarded, four for general excellence, one for special excellence in French, and one for special excellence in German. Awards for the Bursaries for French and German are made only to competitors who have passed the Arts Preliminary and have not obtained any Bursary for general excellence.

*Bursars*—<sup>1</sup>George Anderson, 1903; <sup>1</sup>John W. Tait, 1903; <sup>1</sup>Oswald J. Gardner, 1903; <sup>1</sup>Charles E. Duff, 1903; <sup>1</sup>Annie M. Macphail (German), 1903; <sup>1</sup>Margaret Roughead (French), 1903; Thomas C. Gibson, 1904; Roger G. McDowall, 1904; Herbert J. Paton, 1904; John R. Scott, 1904; Jean Stewart (German) 1904; Mary Hunter (French), 1904; Alexander R. Brown, 1905; Helen B. S. Lennox, 1905; Ruth E. Marwick, 1905; James Porter, 1905; Nettie H. Stein (German), 1905; Isabella Davidson (French), 1905; William S. Buchan, 1906; Isabel Robertson, 1906; John Agnew, 1906; William Kerr, 1906; Marion S. Orr (French), 1906; David D. Anderson (German), 1906.

COWAN BURSARIES (AYR ACADEMY) (*Arts*).—These Bursaries were founded by the late David Cowan, Esq., of Auchendrane, who bequeathed to the Directors of the Ayr Academy the sum of £2,000, to be invested and held by them in trust, and the annual income thereof applied as Bursaries, to promote the education of two students, one at each of the Universities of Edinburgh and Glasgow, who should have received their previous education, or part of it, at Ayr Academy. These Bursaries are now administered by the "Ayr Educational Trust." Under Scheme 328, Section 26, of the Educational Endowments (Scotland) Commission, approved by Her Majesty in Council on 8th February, 1890, the Governors are instructed to apply an annual sum of not less than £80 in

<sup>1</sup> Vacant through lapse of time.

establishing Bursaries for University education, to be called the Cowan Bursaries, each of the yearly value of not less than £20 nor more than £30. These Bursaries are awarded by competitive examination among those who have been pupils in the Ayr Academy for at least two years before the date of examination, and only those are eligible for appointment who pass the Preliminary Examination occurring first after the termination of their Academy course ; unless it can be shown to the satisfaction of the Governors that any student was unavoidably prevented by illness or other necessary cause from appearing at the Examination first occurring, in which case the Governors reserve to themselves the power to allow such students, should they so decide, to compete at the next following examination. The Governors have resolved to award them alternately to students of Glasgow and Edinburgh Universities. The Bursaries are tenable for three years, the total value of each being £80, payable by instalments of £30 per annum for the first two years, and £20 for the third year. No student who has gained a Cowan Bursary shall hold along with it any other Bursary or Scholarship which either singly or in combination exceeds the amount of £10 per annum, without the consent of the Governors. On a vacancy, intending candidates must send in their names and addresses to the clerk and treasurer, Mr. John Douglas, Wellington Chambers, Ayr, before the first day of September ; and the Senate of the University of Glasgow undertakes the examination of candidates who offer themselves for the Bursary to be held at this University (Vacant).

*Bursar*—John W. T. Dickie (three years), 1905.

**CRAIG BURSARY (*Arts*).**—Founded by Mr. John Craig, merchant in Glasgow, in 1697, for students in Philosophy. Tenable for four years. The preference to kindred of Founder, and students of the name of Craig, was cancelled by Ordinance No. 57 of the Universities Commission (1889). Value, £8 6s. 8d. per annum, increased by the Patrons in 1880 to £25. Appointment by the Merchants' House. Applications to be lodged with W. H. Hill, LL.D., Clerk to the Merchants' House, on or before 1st September of the year in which a vacancy occurs.

*Bursar*—Robert T. Clark, 1906.

**ARCHIBALD CRAIG BURSARY (*Arts*).**—The Rev. Archibald Craig, some time minister of the Free Church at Dalton, thereafter residing at Eaglesham, who died on 10th March, 1873, by his Will, dated 4th March, 1873, bequeathed a sum which, with accretions, amounted in 1884 to £250, to be devoted to the foundation of a Bursary in the University of Glasgow. The Trustees of the Bursary Fund are—the Minister for the time being of the Parish of Eaglesham, the Minister for the time being of the United Presbyterian Church, Newton-



Mearns, and certain other gentlemen. The Bursary was founded in 1884. It is open to competition, at the annual Bursary Examination, to students of either sex entering on the first session of attendance at the University, who are natives of the parishes of Eaglesham or Mearns, or who for two consecutive years have attended school in either of said parishes; is awarded by the Senate in accordance with the result of that examination; and is tenable for the first two years of such student's attendance at the University. The Bursary is payable at the close of the winter session. Should the Bursary be in abeyance during any session or sessions, from failure of students falling under the above description, the accumulation may, in the discretion of the trustees, be applied to the increase of the Bursary in any subsequent session or sessions, or may be added to the capital fund.

*Bursar*—Nannie W. Downie, 1906.

CRAWFURD AND BROWN BURSARY (*Arts*).—The Crawford or Bishop's Bursary was founded by Captain Thomas Crawford of Jordanhill in 1576, and was appropriated to a student in Languages. It was tenable for four years, the value being a chalders of meal. The Patrons were the Principal and the Professors of the University. The foundation was remodelled by ordinance of the Universities Commission, dated 7th June, 1862. The Brown Bursary was founded in 1697 by Colonel Brown of Maryland. It was tenable for four years. The annual value was £5, increased in 1880 to £6 13s. 4d. by an addition from the Students' Bursary Fund. This Bursary, being also in the patronage of the Principal and Professors, was combined with the Crawford Bursary by Ordinance No. 81 of the Universities Commission (1889), the joint-bursary to be called the Crawford and Brown Bursary. The preference as to kindred attaching to the Brown Bursary was abolished. The Crawford and Brown Bursary is tenable for four years, the annual value being £19 13s. 4d. If a bursar graduate at the end of three years, he shall only retain his Bursary during the fourth year of tenure, if he shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. In other respects the provisions of Ordinance No. 57 apply to this Bursary.

*Bursar*—Wallace M. Conley, 1904.

ANDREW CUNNINGHAME BURSARIES (*Law*).—Mr Andrew Cunningham, Town Clerk Depute of Glasgow, who died in 1886, bequeathed to the University, free of legacy duty, £5000, for the purpose of completing the tower, and also £350, the annual revenue of which was to be applied in purchasing a gold medal as a prize in the class of Mathematics. He also bequeathed to the Senate £2000 for

founding two Bursaries in connection with the Scots Law and Conveyancing Classes. The following regulations were adopted by the Senate on 6th April, 1905 :

1. The Bursaries shall be of equal value, and tenable for one year.

2. One Bursary shall be awarded on the report of the Professor to the best student in the Class of Scots Law, and one Bursary shall be awarded on the report of the Professor to the best student in the Class of Conveyancing.

3. The Bursaries may be held along with any other Bursary or Prize.

4. The Bursaries shall be awarded at the close of the winter session and shall be payable at the usual times of payment in the academic year next following, on production of certificates showing that the Bursars are attending some class or classes in the Faculty of Law not attended in a previous year : Provided that the minimum attendance certified be in one class having eighty lectures or in two classes each having forty lectures.

Under these regulations appointments to both Bursaries will be made in March or April, 1908.

*Bursars*—James A. Gordon (Scots Law), 1907 ; James M'Intosh (Conveyancing), 1907.

DONALD CUTHBERTSON BURSARY (*Science*).—Founded in 1900 by Sir John Neilson Cuthbertson, LL.D., and his son Thomas William Cuthbertson, M.A., Trustees of Donald Cuthbertson, LL.B., Accountant in Glasgow, who died on 8th December, 1864. The Bursary Fund amounted to £1,000, being the accumulated revenue and principal of £500 out of the residue of the Testator's estate. After the death of Sir John on 26th January, 1905, his son having predeceased him on 7th May, 1904, the administration of the Fund and Bursary passed, in terms of the Deed of Foundation, to the University Court. The regulations fixed and adopted by the Trustees are to continue in force, and are *inter alia* the following :—

1. The Bursary shall be awarded to a student entering on his course with a view to graduate as B.Sc. in Pure Science, account being taken of the proficiency he has shown in passing the Science Preliminary Examination. 2. The Bursary shall be tenable for a period of three years, provided the Bursar continue his attendance on classes in the University during that period. The present annual value is £32.

*Bursar*—Norman V. Lothian, 1906.

DAVIDSON BURSARIES (*One in Arts and one in Medicine*).—Two in number, founded in 1881, in terms of the Trust Disposition and Settlement of Mrs. Eliza Davidson, who bequeathed £2,000 for that purpose, the one bursary being in memory of her husband, John Davidson, surgeon, Newmilns, and the other in memory of her son, Francis John Ferguson Davidson. A preference is given, *cæteris*

*paribus*, to the Founder's relatives, and to young men natives of the parishes of Muirkirk, Dalserf, Lesmahagow, and Loudon. One of the Bursaries is open to competition to students of the first or second year in the Faculty of Arts, and is tenable for three years, but the second moiety of the third year's Bursary is not payable until the bursar shall have passed the examinations in four subjects taken out of at least two Departments for the Degree in Arts. The other Bursary, also tenable for three years, is awarded to the medical student who stands first in the First Professional Examination, provided that his attendance at the classes has not exceeded the requirements of the Ordinance. The present annual value of each is £32.

*Bursar in Arts*—Robert Thomson, 1906.

*Bursar in Medicine*—<sup>1</sup>Robert R. Bow, 1904.

DENNY BURSARIES (*Any Faculty*).—Four in number, founded in 1875, by the late Peter Denny, LL.D., engineer and shipbuilder, Dumbarton. Value, not less than £30 per annum each, and tenable for four years. Open for competition to all students entering the University who are not under fourteen years of age, and who have been pupils in regular attendance at the Dumbarton Burgh Academy for at least two years, one of which must be immediately preceding the date of such entry. One of the Bursaries will be competed for at the beginning of next session. The examination will be in the same subjects and at the same time as the examination for the other competition Bursaries. The Trustees are Mr. Peter Denny and Mr. Leslie Denny, nominated in 1896 by the Sheriff of Dumbartonshire, the Principal and Professors, and one of the four Assessors of the General Council in the University Court appointed by the four Assessors, or a majority of them, in accordance with the provisions of Ordinance No. 91 of the Universities Commission (1889).

*Bursars*—<sup>1</sup>Robert W. Roxburgh, 1903; Harvey H. Montgomerie, 1904; William M. Balfour, 1905; Catherine McColl, 1906.

GLASGOW DUMFRIESSHIRE SOCIETY'S BURSARIES (*Any Faculty*).—Two in number, the one founded in 1874 and the other in 1876. They are in value £15 per annum each, are tenable for four years, and consist of the annual proceeds of a sum subscribed by members of the Glasgow Dumfriesshire Society and invested for the establishment of Bursaries in Glasgow University. The Bursaries are open to first and second year's students, between the ages of 14 and 27, who are either descendants of members of the Glasgow Dumfriesshire Society, or natives of Dumfriesshire, or sons of natives resident in Glasgow, whose circumstances render the aid of a Bursary necessary or desirable. Application to be made to the Secretary, Mr. Francis Stoddart, 212 St. Vincent Street, Glasgow, not later than

<sup>1</sup> Vacant through lapse of time.

1st September of the year in which a vacancy occurs. There are no bursaries at present.

**DUNCAN'S BUTE BURSARIES (*Arts*).**—Founded in 1875 for the benefit of natives of the island of Bute, by Mr. James Duncan of Valparaiso, and afterwards of Rothesay, who by his Will of date 19th October, 1874, bequeathed £2,000 for this purpose. The Trustees and Patrons are the Principal, the Professor of Mathematics, the Professor of Natural Philosophy, and the Provost of Rothesay, all for the time being. Candidates must be natives of the island of Bute, and must be entering on their first or second session in the Faculty of Arts at the University. The Bursaries are two in number, tenable for four years; but the Patrons may in each case continue the Bursary for a fifth year to assist a student who may have been assiduous in his Academical studies, in private study, or in Continental travel, or other pursuits conducive to relaxation, combined with enlargement of his experience of men and things. The examination is in the same subjects and at the same time as the examination for the other competition Bursaries. There is a preference, *ceteris paribus*, to the name of Duncan, in such degree as the Patrons shall determine; in other cases of equality the Bursary may be divided. Present annual value, £35 to each Bursar. On 28th October, 1897, the Patrons made a by-law declaring that it should not be competent for any one appointed after that date to a Duncan's Bute Bursary to hold any other Bursary or Scholarship concurrently with it. (One vacancy).

*Bursar*.—William C. Cameron, 1905.

**DUNDONALD BURSARIES (*Eight in Arts and Six in Theology*).**—In 1672, William, Earl of Dundonald, founded seven Bursaries—four in Philosophy and three in Divinity.

In 1858 the surplus funds of this foundation having greatly accumulated, an Act of Parliament was obtained, authorizing an increase in the number of Bursars, but providing that the total number of Bursars in Philosophy shall, at all times, bear to the number of Bursars in Divinity the proportion of four to three, as nearly as may be. The Bursaries are now fourteen in number—eight in Philosophy and six in Divinity.

The Bursaries were further regulated by Ordinance No. 94 of the Universities Commission (1889). The Bursaries in Arts are tenable for four years, but if a bursar graduate at the end of three years, he shall only retain his Bursary for the fourth year of tenure, if he engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. The Bursaries in Divinity are tenable for three years, and no longer. A student cannot be appointed to a Dundonald Bursary in Divinity unless he has passed all the examinations required for graduation in Arts. In other respects the provisions of Ordinance No. 57

apply to all the Bursaries on this Foundation. The Bursars in Arts receive £40 each per annum, and those in Divinity £41 2s. 6d. The patronage lies with the Trustees of the late Duke of Hamilton, and is exercised by their Commissioner, George Dalziel, Esq., 66 Queen Street, Edinburgh, to whom applications should be sent on or before the first of September. One appointment in Arts and one in Divinity will be made for next session.

*Bursars in Philosophy*—<sup>1</sup>George Blair, 1903; James R. Brown, 1904; John Brown, 1905; Archibald T. Cockburn, 1906.

*Bursars in Divinity*—<sup>1</sup>Matthew Biggar, M.A., 1904; Robert S. Armstrong, M.A., 1905; Andrew Templeton, M.A., 1906.

**JAMES EWING ENTRANCE BURSARIES (Arts).**—Four in number, founded in 1879 by the Merchants' House of Glasgow in accordance with the Deed of Endowment of the late Mr. James Ewing of Strathleven. The Directors resolved to apply annually £80 of the income of his legacy of £10,000 for educating, training, and settling in business the sons of Glasgow merchants in entrance Bursaries of £20 each. The Bursaries are tenable for four years by students giving regular attendance on classes in the Faculty of Arts. Open to first year's students. The appointments to the Bursaries will be made in accordance with the annual Bursary competition at the commencement of the session; candidates to be qualified as above. Applications to be lodged with Wm. H. Hill, LL.D., Clerk of the Merchants' House, on or before 1st September, in each year. (One vacancy.)

*Bursars*—<sup>1</sup>George Harvie, 1903; Robert C. Davie, 1904; Alexander J. B. Milne, 1906.

**JAMES FERGUSON BURSARIES (Theology, Law, Medicine, or Department of Engineering Science).**—Two in number, founded in 1877, under provision of the Trust Disposition and Settlement of the late James Ferguson, Esq., of Wiston, and consisting of the annual proceeds of a sum of £3,600. The Bursaries are now each of the annual value of £95, and are tenable in the University of Glasgow for two years in any of the three Faculties of Divinity, Law, or Medicine, or in the Department of Engineering Science. The Bursaries are awarded for special proficiency in Arts studies, according to the following rotation, viz.:—In November, 1878, and thereafter triennially, in Mental Philosophy, together with English Literature; in November, 1879, and thereafter triennially, in Mathematics and Natural Philosophy; in November, 1880, and thereafter triennially, in Classical Literature. The Examination is the same as that for honours in the Groups of Classics, Mental Philosophy, and Mathematics and Natural Philosophy respectively (with the addition in the case of the Group of Mental Philosophy of a paper on English

<sup>1</sup> Vacant through lapse of time.

Literature), at the annual Examination for Degrees in October. Candidates must have completed the course of attendance required for admission to examination in the corresponding Group for the Degree of M.A. with Honours. Each Bursar must pursue the course of study for such Degree in Divinity, Law, Medicine, or Engineering Science, as he may, with approval of the Senate, select. In the event of a successful candidate not having completed attendance on the Arts classes necessary to qualify for the Degree of M.A., he shall be at liberty, without forfeiting his right to the Bursary, to continue his studies in Arts for two years, in order that he may complete his qualifications for graduation; but no part of the Bursary shall become payable until he has selected and entered upon a course of study in one of the three Faculties above mentioned, viz.:—Divinity, Law, or Medicine, or in the Department of Engineering Science. While the Bursary is tenable for two years of such course, the Bursar must continue his attendance on classes beyond the two years, if this be necessary for graduation or for receiving the Certificate of Proficiency in Engineering Science. The Bursar shall not receive payment of any half-yearly Bursar without such evidence as the Senate may require that he is faithfully pursuing the selected course, and shall not receive payment of the fourth half-yearly Bursar until he has graduated or received the Certificate of Proficiency in Engineering. Unless a candidate comes up to at least the standard of Second Class Honours, the Senate shall not be bound to award the Bursary. There is a preference, *ceteris paribus*, to young men natives of the parishes of Lesmahagow or Muirkirk, or the province of Pictou, Nova Scotia, and also to young men of the name of Ferguson or Weir, or to descendants and relatives of the founder.

Candidates for the Bursary to be competed for in 1907 will be examined in Classics along with the examinations on these subjects for the Degree of M.A. with Honours. Names to be given in to the Assistant Clerk (Matriculation Office) not later than 16th September.

*Bursar*—David N. Strathie (Math. and Nat. Phil.), 1906.

FORFAR BURSARIES (*Arts*).—Founded by the Countess of Forfar in 1737. The foundation was remodelled by the Universities Commission (1858), by Ordinance of 31st May, 1862, and further regulated by Ordinance No. 79 of the Universities Commission (1889) of date 15th February, 1895. There are now five Forfar Bursaries in the gift of the Senate: the holder of each to receive £36, if the funds allow. These Bursaries are open for competition to all students entering the first or second session of attendance at the University. They are tenable for four years, subject to the condition that the bursar shall proceed through the curriculum in

Arts, and shall pass the examinations for the Degree of M.A. If a bursar graduate at the end of three years, he shall only retain his Bursary during the fourth year of tenure if he shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. In other respects the provisions of Ordinance No. 57 of the Universities Commission (1889) apply to the Forfar Bursaries. The Senate, acting under Section XIII. of the said Ordinance, have resolved to award four of these bursaries in respect of exceptional distinction in Classics, viz., one each year to a student of the first year who, having passed the Arts Preliminary, has gained the highest marks in Latin and Greek in the Bursary examination and has not obtained a bursary for general excellence.

*Bursars*—<sup>1</sup>William McEwan (1906), 1903; Robert Gibson (Classics), 1904; Bryce K. N. Wyllie (Classics), 1905; George A. Johnston, 1906; James B. Hutton (Classics), 1906.

**FORREST BURSARIES** (*Any Faculty*).—Founded by Mr. William Forrest of Easter Meadowhead, Drumgelloch, and Meadowsides, by Deed of Mortification of date 6th March, 1858. The Trust was re-constituted in 1886, under a Scheme of the Educational Endowments Commission. The Bursaries are five in number, each of the annual value of £22, and tenable at the University of Glasgow for such number of years, not exceeding five, as the Governors may determine. The Bursaries are awarded by competitive examination among young men who require aid in obtaining a University education, and who have been pupils in public or State-aided schools within the parishes of New Monkland, Slamannan, and Shotts, or who are natives of said parishes. Bursars cannot hold another Bursary, must prosecute a course for some degree, and attend at least two classes each session.

Governors—The Provost of Airdrie, the ministers of the parishes of New Monkland, Airdrie, and Clarkston, one representative from each of the School Boards of Airdrie and Clarkston, and one from the School Boards of Slamannan and Shotts alternately, and one appointed by the Sheriff of Lanarkshire. Secretary, Mr. G. B. Motherwell, Town Clerk, Airdrie. (Two vacancies.)

*Bursars*—John Drummond, 1903; Peter C. Millar, 1904; Alexander Lindsay, 1904; Richard H. Stewart, 1906.

**FORRESTER BURSARY** (*Arts*).—Founded in 1901 by the Trustees of the late James Forrester, merchant in Airdrie, in accordance with the instructions contained in his Trust Disposition and Settlement. The Trustees are the patrons. The Bursary, which is of the annual value of about £20, and tenable for three years, is

<sup>1</sup> Vacant through lapse of time.

open to competitors of either sex, born in the parish of Dunblane or Lecropt, and requiring assistance to enter the University. It will be awarded after public examination of the candidates at the Bursary Competition in connection with the Faculty of Arts in the University of Glasgow. It shall not be held by any Bursar along with any other Bursary or Scholarship whatsoever. If two candidates are found to be equal in merit, the Trustees may divide the Bursary between them. When no candidate of sufficient merit makes application, the Bursary will lapse until the following year. Whenever the Bursary remains vacant for a year or years, the income accumulated will go to increase the Benefit of the first successful applicant, the accumulated interest being spread over the three years of tenure. When a vacancy occurs, applications should be lodged with Alexander B. Barty, LL.B., Writer, Dunblane, on or before 1st September.

*Bursar*—<sup>1</sup> Elizabeth S. Bruce, 1904.

FOUNDATION BURSARIES (*Arts*).—These Bursaries were founded by James VI., in 1577, for students in Languages and Philosophy, and were originally four in number. By ordinance of the Universities Commission (1858) of date 7th June, 1862, these Bursaries were remodelled, and were further regulated by Ordinance No. 84 of the Universities Commission (1889) of date 15th February, 1895. Under the new scheme there are two Foundation Bursaries, the holder of each to receive £20 per annum. They are open for competition to all students entering the first session of attendance at the University, and are tenable for four years. The class attendance of the Foundation bursars is regulated by Ordinance No. 57, Sec. III. The Senate, acting under Section XIII. of the said Ordinance, have resolved to award these bursaries in respect of exceptional distinction in English, viz., one bursary in alternate years to a student of the first year who, having passed the Arts Preliminary, has gained the highest marks in English in the Bursary examination and has not obtained a bursary for general excellence. If a bursar graduate at the end of three years, he shall only retain his Bursary during the fourth year of tenure if he shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science.

*Bursars*—James Malcolmson (English), 1904; Donald C. Smith (English), 1905.

FRANCO-SCOTTISH SOCIETY'S TRAVELLING BURSARIES (*Arts*).—The Scottish Branch of the Society offers for 1907 two Travelling Bursaries of £30 each for competition among students of Scottish parentage. The examination will be held simultaneously in the four Scottish Universities on 9th March, 1908. Candidates must send

<sup>1</sup> Vacant through lapse of time.



their applications, names, addresses, and certificates of attendance in at least one of the University French Classes, during one or both of the sessions 1906-7 and 1907-8 (accompanied by a stamped and addressed envelope), to J. W. D. Kirkland, Esq., S.S.C., Hon. Secretary, 20 George Street, Edinburgh, between 18th February and 2nd March, 1908, only, and state at which of the four Universities they desire to be examined. Candidates from the Training Colleges will also be admitted to the examination, although they have not attended University Classes. The Bursars are required to study French in France for at least three months during the currency of the year in which the Bursaries have been gained, to the satisfaction of the Society.

The competition is open to those candidates only who hold no other Scholarship, Bursary, or Grant for the purpose of enabling them to study French.

**FULLARTON OF OVERTON BURSARIES (Arts).**—By Deed of Mortification and Constitution dated 22nd December, 1877, the Executors of the late John Fullarton, Esq., of Overton, West Kilbride, Ayrshire, in pursuance of his Trust Disposition and Settlement and Codicils, assigned to the Principal and Professors of Glasgow University, as Patrons, the residue of his estate, amounting to £2,604 17s. 7d., for the purpose of founding five Bursaries, more or less, each of the annual value of at least £10, but not exceeding £30. The present annual value to each bursar is £22. The Bursaries are tenable for two years by students in Arts under 25 years of age, belonging to or resident in the district of Cunninghame, in Ayrshire, children of parents whose means and social position are not above those of tradesmen, small farmers, or shopkeepers, or others who may be struggling to secure their better education, and are by themselves, or with such assistance as they may be able to get from their parents or relations, unable to provide for the expenses of a University education. The Bursaries are awarded by competitive examination in Latin, Elementary Mathematics, and English; but no candidate is eligible who has attended any University for more than one session. A Bursary may be divided between two candidates of equal or nearly equal merit, but as between a candidate who has not previously attended any University and a candidate who has so attended, the former is preferred. A Bursar may attend each session one or more of the classes in the Faculty of Arts, the selection of classes being left to his own option. Any accumulations through vacancies are added to the capital sum. Candidates are required to produce evidence of age.

**Bursars**—<sup>1</sup>John J. Young (1906), 1905; <sup>1</sup>David Wilson, 1905; James S. Weir, 1906; John B. Short, 1906; James Cunningham, 1906.

<sup>1</sup> Vacant through lapse of time.

WILLIAM GARDINER BURSARIES (*Arts, Medicine*). — William Gardiner, M.D., of Ashton-under-Lyne, by his Settlement, dated 27th September, 1897, directed his Trustees to pay over to the University Court the sum of £1000, free of legacy duty, for the purpose of founding one or more Scholarships, Bursarships, or Exhibitions, to be devoted to such objects and in such manner as the Court should think fit, preference being given to students of Chemistry, Physiology, and Physics, French and German, and, so far as practicable, to sons of medical men, lawyers, and teachers.

The following regulations were approved by the University Court on 4th October, 1900:—

1. The Bursaries shall be two in number, equal in value, and each tenable for two years.

2. One Bursary shall belong to the Faculty of Medicine, and shall be awarded after the Autumn Professional Examinations in Medicine to the candidate who in the year in which the bursary is open has passed in Physiology of the second professional examination, and whose aggregate of marks in that subject and in Chemistry and Physics of the first professional examination, is the highest.

3. The other Bursary shall belong to the Faculty of Arts, and shall be awarded to the student who obtains the highest marks in French and German as subjects of the General Bursary examination in the year in which the Bursary is open, provided that it shall be in the power of the Senate to award the bursary for decided proficiency shown by a candidate in one of the said languages. The holder of this bursary must attend the French class or the German class in the University, and pass the examination in one or other of these subjects required for graduation in Arts. The second moiety of the second year's Bursary shall not be paid until the Bursar shall have passed this examination.

4. Either of the William Gardiner Bursaries may be held along with any other Bursary in the University, if the regulations of that other Bursary permit.

5. The Bursaries shall be open to both men and women, effect being given, *ceteris paribus*, to the preference expressed in the Will of Dr. Gardiner for sons of medical men, lawyers, and teachers.

The present annual value of each is £14.

Bursars—<sup>1</sup>Isabella F. Dove (Arts), 1905; <sup>1</sup>Ralph M. F. Picken (Med.), 1905.

GARTMORE BURSARY (*Arts*).—In accordance with the directions of the Founder of the Gartmore Medal (see p. 421), the Universities Commission (1889), by Ordinance No. 98, founded this Bursary, a sufficient capital having accumulated from the surpluses of the Foundation. It is open by competition to all students entering on their first year of attendance on a course for graduation in Arts, and

<sup>1</sup> Vacant through lapse of time.

is tenable for three years. Value, £21 per annum. In other respects the provisions of Ordinance No. 57 apply to the Gartmore Bursary.

*Bursar*—Robert Clark, 1906.

**GENERAL COUNCIL BURSARIES (*Arts*).**—Under a scheme originated by the late Mr. David Hannay, Clerk to the General Council, a sum of about £500 (Fund No. I.) was raised by subscription among the members of Council for the foundation of Bursaries to be held for three years, and open to competition to first and second year's students in Arts. This fund has now been exhausted. In addition, a sum of £2,382 2s. (Fund No. II.) was raised to form the nucleus of a permanent General Council Bursaries Fund, and invested in the names of Trustees. Of this sum £1,000 is due to the liberality of the late Rev. Wm. Park, D.D., minister of Airth, to be applied in memory of his brother, the Rev. John Park, D.D., minister of Cadder. With Dr. Park's consent, the income of this sum was appropriated to two General Council Park Bursaries of £20 a-year, open to students of either sex who, having passed the Preliminary Examination in Arts, are about to commence their second year of actual attendance at the University. The General Council Park Bursaries are tenable for two years. The remainder of the free income of the fund is devoted to providing bursaries, called the General Council Bursaries, of such number and of such amount as may from time to time be determined by the Trustees. The General Council Bursaries are open to students of either sex on their first entering the University, and are tenable for three years. No candidate shall obtain a General Council Bursary who shall not have passed the Preliminary Examination in Arts, but it is in the power of the Trustees to admit to a General Council Bursary, a candidate who has passed in at least three subjects of the Preliminary Examination on condition that the bursary shall not be retained unless the bursar passes in all the subjects not later than the second Preliminary Examination held after the time of admission. In 1903 and triennially thereafter (1909) one General Council Bursary shall be awarded in respect of special distinction in Dynamics to the student of the first year who, having passed the Arts Preliminary, has gained the highest marks in Dynamics in the Bursary examination, and has not obtained a bursary for general excellence. (One vacancy.)

*Bursars*—Mary S. Anderson, 1905 ; <sup>1</sup> Frederick A. Stewart, 1905 (Park) ; William S. Kerr (Dynamics), 1906 ; James Stothers, 1906 (Park).

**JOHN GIBSON BURSARIES (*Any Faculty*).**—Founded in 1877 by Miss Jane Gibson, in memory of her father, John Gibson of Oakbank and Johnstone, merchant in Glasgow. The Bursaries, which may be given to one student, or at most two, consist of the annual proceeds of £1,000. The administration is vested in trustees, who

<sup>1</sup> Vacant through lapse of time.

have great discretionary powers as to the conditions on which the Bursaries may be held. Their subsisting resolution is to award the Bursary to a Medical student entering on the third year of his course, and that it be retainable for three years. When a vacancy occurs applications and relative testimonials are to be lodged not later than 1st October with Messrs. A. J. & A. Graham, 198 West George Street, Glasgow, who will furnish forms of application. (One vacancy.)

*Bursar*—Robert B. F. McKail, 1906.

DR. THOMAS GIBSON (ROTHESAY) BURSARY (*Medicine*).—Founded in 1893 in terms of the Trust Disposition and Settlement of Misses Christian and Janet Gibson, who bequeathed £1,000, free of legacy duty for that purpose, in memory of their brother. Present annual value, £36. The Bursary is tenable for four years, and is open to any matriculated student of Medicine (male or female) in the University preparing for service as a Medical missionary in connection with the Church of Scotland, who has completed the first professional examination in the year in which the Bursary is open. The Bursary is awarded to the qualified applicant who has obtained the best marks in the said examination; but in the case of an equality of marks between two or more candidates, the Senate may hold a further examination to determine to which of such candidates the Bursary shall be awarded. In the case of a casual vacancy, the Senate may appoint for the remainder of the period of tenure any qualified applicant who has shown diligence and proficiency in the earlier part of the curriculum in Medicine. In the event of the Bursary not being awarded in any year or years from lack of qualified candidates, the Senate may, in any subsequent year, if the funds of the Foundation admit, award an additional Bursary for one or more years, not exceeding four. There is a preference, *cæteris paribus*, to students of the name of Gibson.

*Bursar*—<sup>1</sup>John M'Vittie (one year), 1906.

GILCHRIST BURSARY.—See Howison and Gilchrist, p. 348.

GILHAGIE AND STRUTHERS BURSARY (*Theology*).—The Gilhagie Bursary was founded in 1753 by Agnes Gilhagie, widow of William Somerville, merchant in Glasgow, for a student in Divinity. It was tenable for four years, the annual value being £6 6s. In 1624 the Rev. William Struthers founded two Bursaries, each of the annual value of £6 13s. 4d., for students of Divinity. By Ordinance of the Universities Commission (1858) the two Struthers Bursaries were conjoined into one, tenable for three years, the holder to be M.A., and a student of Divinity. All other restrictions were abolished. By Ordinance No. 82 the Universities Commission (1889) combined the Gilhagie Bursary and the Struthers Bursary into one, called the Gilhagie and Struthers Bursary. The patrons of the joint-

<sup>1</sup> Vacant through lapse of time.

bursary are the Magistrates, Town Council, and Ministers of Glasgow, who may present any person without preference as to name, provided that he be a Master of Arts of a Scottish University. The Bursary is tenable for three years, and no longer, subject to the condition that the bursar shall during that period give regular attendance as a student of Theology in the University of Glasgow. When a vacancy occurs, applications are to be lodged with the Town Clerk, City Chambers, not later than 1st September.

*Bursar*—James R. Lee, M.A., 1906.

GLASGOW CITY EDUCATIONAL ENDOWMENTS BURSARIES (*Arts, etc.*).—Under scheme 10, section 31, of the Educational Endowments (Scotland) Commission, approved by Her Majesty in Council, on 19th May, 1885, the Governors of the Glasgow City Endowments Board are instructed to apply the annual sum of £500 in establishing Bursaries at the University of Glasgow. Each Bursary is of the yearly value of £25. One half of these Bursaries are to be awarded among the King's Scholars at Training Colleges who have attended two years at the University of Glasgow, on the report of the Board of Examiners appointed by the Scotch Education Department. Every King's Scholar obtaining such Bursary shall be taken bound to complete his curriculum for a degree in Arts or Science during the time he holds the Bursary, and thereafter to submit himself for examination for such degree. The other half of the Bursaries are to be awarded by competitive examination among those who have attended public or State-aided schools in Glasgow, and who require aid in obtaining a University education. They are tenable for four years. Forms of application may be had from the Secretary of the Board—Mr. W. H. Macdonald, Hutchesons' Buildings, Ingram Street—and should be lodged with him on or before the 1st day of September in each year. The names of candidates who are found to possess the prescribed qualifications will be sent by him to the Clerk of Senate that they may be entered at the University competition for Bursaries for the first year. The Bursaries will be awarded to those candidates highest in order of merit who fail to win a Bursary at the general competition. In 1907 five King's Scholars and three other Bursars will be appointed.

*Bursars*—<sup>1</sup>Peter R. McNaught, 1903 ; <sup>1</sup>Margaret B. Moir, 1903 ; <sup>1</sup>Douglas D. Robertson, 1903 ; Eric D. Macgregor, 1904 ; Robert F. Rattray, 1904 ; John S. Anderson, 1905 ; Thomas S. Campbell, 1905 ; Catherine Craig, 1905 ; James A. McCardel, 1906 ; Jeanie B. Trench, 1906.

*King's Scholars*—<sup>1</sup>Annie P. Irvine, M.A., 1905 ; <sup>1</sup>Christina C. MacEwen, M.A., 1905 ; <sup>1</sup>Annie Thomson, M.A., 1905 ; <sup>1</sup>David B. Meek, 1905 ; <sup>1</sup>James Ritchie, 1905 ; Robert W. Craig, 1906 ; Jane Hamilton, 1906 ; William Paterson, 1906 ; John Robb, 1906 ; James C. Wilson, 1906.

<sup>1</sup> Vacant through lapse of time.

GEORGE GRANT BURSARY (*Arts*).—Founded in 1885 by Miss Susan Smith Grant of West Thorn, Lauder Road, Edinburgh, in memory of her father, George Grant, Esq., cotton spinner, Mile-End, Glasgow. Miss Grant assigned and conveyed to the Senate the sum of £1,200 in trust, to be applied in all time coming for providing one Bursary in connection with the Faculty of Arts. Miss Grant retains the right of nomination to the Bursary during her lifetime, but has provided that in the event of her failing or declining to nominate, and in all cases after her death, the Bursar shall be determined by competitive examination of first year students who are entering on a three or four years' course of study, and the Bursary shall be tenable for three or four years accordingly. On the Bursary falling vacant otherwise than by lapse of time, an appointment may be made for the remainder of the term, or for the full period after competition. The Bursar is required to graduate in Arts, and before payment of the second moiety of the last year's Bursary he must produce evidence that he has taken his degree, or that he has passed all the examinations necessary for graduation. Any accumulations from vacancies or otherwise are to be added to the capital sum.

*Bursar*—Henry J. C. Gibson, 1906.

GEORGE GRANT, JUNIOR, BURSARY (*Arts*).—Founded in 1885 by Mrs. Agnes Grant or Mair, wife of the Rev. John Mair, D.D., minister of the parish of South Dean, Roxburghshire, in memory of her brother, the late George Grant, junior, cotton manufacturer, Mile-End, Glasgow. Mrs. Mair, with the advice and consent of her husband as her curator and administrator-in-law, and for his interest in the premises, assigned and disposed to the Senate the sum of £1,200 in trust, to be applied by them in all time coming for providing one Bursary in connection with the Faculty of Arts. Mrs. Mair reserved to herself during her lifetime, and thereafter to her husband, should he survive her, the right to nominate to the Bursary, and to fix the classes to be attended by the Bursar and the period of his tenure. Mrs. Mair died on 27th November, 1900, and Dr. Mair on 27th January, 1902. The Bursary is tenable for four years, and the Bursar is selected by competitive examination of first year's students. In the event of a vacancy occurring otherwise than by lapse of time an appointment may be made for the remainder of the term, or for the full period after competition. The Bursar is required to graduate in Arts, and before payment of the second moiety of the last year's Bursary must produce evidence that he has taken the degree, or that he has passed all the examinations necessary for graduation. Any accumulations through vacancies or otherwise are to be added to the capital sum.

*Bursar*—<sup>1</sup> Henry I. Cunningham, 1903.

<sup>1</sup> Vacant through lapse of time.

**HAMILTON BURSARIES** (*Three in Arts, and Three in Theology*).—These Bursaries, now six in number, were founded by Anne, Duchess of Hamilton, in 1694. They were regulated by Act of Parliament, 1758, and further regulated by Ordinance No. 96 of the Universities Commission (1889). There are three Hamilton Bursaries in the Faculty of Arts, and three in the Faculty of Divinity, and each of them is tenable for three years, and no longer. The bursars in the Faculty of Arts shall attend such classes qualifying for graduation in Arts, and in such order as may be approved by the Senate. In other respects the provisions of Ordinance No. 57 apply to the Bursaries on this Foundation. The bursars in Arts receive £20, those in Divinity £25 per annum each, should the state of the funds permit. The patronage lies with the Trustees of the late Duke of Hamilton, and is exercised by their Commissioner, George Dalziel, Esq., 66 Queen Street, Edinburgh, to whom applications should be sent on or before the first of September. (One vacancy in Arts, and one in Divinity.)

*Bursars in Arts*—Henry Leitch, 1904; John C. Kinnear, 1905; William M'Bride, 1906.

*Bursars in Theology*—<sup>1</sup>John M. Woodburn, 1904; Donald C. B. Gordon, 1905; Alexander Mauchline, M.A., 1906.

**HAMILTON EDUCATIONAL TRUST BURSARIES** (*Arts*).—Under scheme 39, section 28, of the Educational Endowments (Scotland) Commission, approved by Her Majesty in Council on 13th May, 1887, the Governors of Hamilton Educational Trust are instructed to apply a sum, not less than £50 yearly, in providing University or Technical College Bursaries. These Bursaries, each of the yearly value of £20, and tenable for three years, are open to be competed for by pupils attending public or State-aided schools in the burgh and parish of Hamilton, who require aid in obtaining a University or higher education. The Governors reserve power to withhold or withdraw the Bursary in whole or in part on the applicant or bursar being appointed to any other bursary. Applications to be lodged with Patrick Keith, Esq., Hamilton, Clerk of the Trust, on or before the first day of September. (One vacancy.)

*Bursars*—<sup>1</sup>Margaret Blair, 1903; David F. Steele, 1904; Robert M'D. Walker, 1905; Robert Clark, 1906.

**HANNAY BURSARIES** (*Arts*).—Three in number, founded in 1865 by the late Mr. Anthony Hannay, merchant, Glasgow, in memory of his deceased wife. To be awarded to young men, not under fourteen and not above nineteen years of age, who are about to commence their studies in the Arts classes, with a view to the Holy Ministry in connection with any of the Evangelical Religious Denominations

<sup>1</sup> Vacant through lapse of time.

in Scotland, and who shall engage to attend during each of the first three years of the curriculum not fewer than two classes. The principal qualifications of those to be selected are good moral character, promising talent, a fair preliminary education, and a want or deficiency in the necessary pecuniary means for pursuing a University education. Candidates for these Bursaries are required to submit themselves to the annual Bursary Examination at the commencement of the Winter Session of the University of Glasgow, or such other examination as the trustees may appoint; but the result of said examination shall only be taken as one of the tests in judging of the merits of the applicants. The Bursaries to be bestowed for three years—one to be given each year. Value, about £15 per annum each. The appointment is vested in the Principal, the Dean of the Faculty of Procurators in Glasgow, and the President of the Faculty of Physicians and Surgeons in Glasgow. Applications to be made to Mr. Robert Brodie, 77 St. Vincent Street, and also to the Assistant Clerk (Matriculation Office) not later than 1st September. (One vacancy).

*Bursars*—Neil W. Wilson, 1905; John McDougall, 1906.

**HASTIE BURSARIES** (*One in Arts and Two in Theology*).—The Rev. Mr. Hastie, by Deed of Mortification dated 5th September, 1707, founded a Bursary for a student in this University, which was first awarded in 1718. By an addition afterwards made to the foundation, the number of Bursaries was increased to three, two in Divinity and one in Philosophy.

The Universities Commission (1858), in an Ordinance of date 31st May, 1862, made regulations for these Bursaries, and further regulations have been made by the Commissioners (1889) in Ordinance No. 90. There are now three Bursaries on this Foundation, each £26 in value—one in Arts and two in Theology. The Bursary in Arts is open by competition to all students entering on their first session of attendance in the Faculty of Arts, and is tenable for four years, but if a student graduate at the end of three years, he shall only retain his Bursary for the fourth year of tenure if he shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. The Bursaries in Divinity are open by competition to all students who are Masters of Arts, or who have passed all the examinations necessary for graduation in Arts, and who are entering on their first session of attendance in the Faculty of Divinity. They are tenable for three years, and no longer. In other respects the provisions of Ordinance No. 57 of the Universities Commission (1889) apply to all the Hastie Bursaries. The Senate, acting under Section XIII. of the last-mentioned Ordinance, have resolved to award the Hastie Bursary in Arts in respect of exceptional distinction in English,



to a student of the first year who, having passed the Arts Preliminary, has gained the highest marks in English in the Bursary Examination, and has not obtained a bursary for general excellence.

*Bursar in Arts*—Tom D. Miller (English), 1906.

*Bursar in Theology*—<sup>1</sup>James H. Cockburn, M.A., 1904; David W. M'Lean, M.A., 1906.

GLASGOW HIGHLAND SOCIETY'S BURSARIES (*Seven in Arts and Nine in Medicine*).—In 1892 the Managers of the Glasgow Highland Society framed a scheme of Scholarships and Bursaries for students of Highland descent. The scheme includes Scholarships tenable at Secondary or Technical Schools, and Bursaries tenable at the Glasgow and West of Scotland Technical College and at the University. The Bursaries may be held by men or women in a proportion to be determined by the Managers. The University Bursaries in Arts are seven in number, each of the annual value of £20, and tenable for three years in the Faculty of Arts, but the continuance of a Bursary in the second and third year is dependent on the character of the certificates obtained by a Bursar in his classes in the previous year. They are awarded by competition among students of the first year. The Bursaries in Medicine, each of the annual value of £25, are tenable for five years in the University, or any other College approved by the managers. Candidates must pass the preliminary examination of the College at which they desire to attend, and the managers reserve to themselves the right to appoint the most suitable. In 1907 there will probably be two Bursaries in Arts and two in Medicine open to competition. Forms of application may be obtained from the Secretary, Mr. Hugh Brown, C.A., 58 St. Vincent Street.

*Bursars in Arts*—William M'Nicol, 1903; Angus Nicolson, 1904; John Nicolson, 1904; Henrietta H. Duff, 1905; George Scott, 1905; James M. M'Phail, 1906; Arthur Steven, 1906.

*Bursars in Medicine*—Alexander Mackinnon, 1903; George Macleod, 1904; Angus Millar, 1904; Donald C. Macdonald, 1905; David W. B. F. Campbell, 1905; Farquhar Matheson, 1906; James Matheson, 1906.

HILL BURSARIES (*Arts*).—Four Bursaries of the annual value of not less than £10, nor more than £25 (present value £15). Of these Bursaries, tenable for three years, two shall be held at the University of Glasgow, and two either at that University or at the Glasgow and West of Scotland Technical College. The Bursaries shall be awarded on the results of the Bursary Competition of the University of Glasgow or the Preliminary Examination

<sup>1</sup> Vacant through lapse of time.

for the Diploma of the Technical College, and shall be open to pupils attending the secondary departments of public or State-aided schools in the district of the School Board of the Parish of Govan who shall be approved by the Governors of Hill's Trust, and whose parents are in such circumstances as to require aid in giving their children higher education or technical instruction. Secretary, Mr. Richard D. Donaldson, 155 Bath Street, to whom in case of a vacancy application should be made before 1st September. (Four vacancies.)

**HOWISON AND GILCHRIST BURSARY (*Arts*).**—In 1613 the Rev. John Howison, Minister of Canbuslang, founded a Bursary for a qualified scholar of honest name and good report, son of a craftsman of Glasgow. Failing the son of a craftsman of Glasgow, any other qualified scholar might be selected by the Patrons. Mr. John Gilchrist, tailor in Glasgow, founded in 1700 a Bursary in Philosophy for a student, being the son of a tradesman freeman in the burgh of Glasgow, with a preference to the names Gilchrist, Bryce, and Boyd.

By Ordinance No. 89 the Universities Commission (1889) combined these two Bursaries into one, called the Howison and Gilchrist Bursary. The Patrons are the Trades' House of Glasgow, and any person may be presented without restriction as to birth or preference as to name. The Bursary is tenable for four years, but if a bursar graduate at the end of three years, he shall only retain his Bursary during the fourth year of tenure if he shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. In other respects the provisions of Ordinance No. 57 apply to this Bursary. Value £10 per annum.

*Bursar*—Adam B. Mitchell, 1904.

**HUTCHESONS' EDUCATIONAL TRUST BURSARIES.**—Under Scheme 9, Section 40, of the Educational Endowments (Scotland) Commission, approved by Her Majesty in Council on 5th March, 1885, the Governors of Hutchesons' Educational Trust are instructed to apply an annual sum of not less than £400 in establishing University or Technical College Bursaries. These Bursaries, each of the yearly value of £20, and tenable for four years, are open to be competed for by boys who have attended Hutchesons' Grammar School for at least two years immediately preceding the competition, and completed the curriculum in the Secondary Department. Forms of application may be had from the Secretary of the Trust—Mr. W. H. Macdonald, Hutchesons' Buildings, Ingram Street—and should be lodged with him on or before the first day of September in each year. The names of candidates who are found to possess the prescribed qualification will be sent by him to the Clerk of Senate that they may be entered at the University competition for Bursaries for the

first year. The Bursaries will be awarded to those candidates highest in the order of merit who fail to win a Bursary at the general competition. In 1907 five Bursars will be appointed.

*Bursars*—<sup>1</sup>James W. Findlay, 1903; <sup>1</sup>Joseph John Graham, 1903; <sup>1</sup>Ernest W. Russell, 1903; Robert Stephen, 1904; Douglas A. W. Berry, 1904; Samuel W. Hutcheon, 1904; George Millar, 1904; David Miller, 1904; Robert B. Austin, 1905; Robert Drummond, 1905; Nicolas Gebbie, 1905; John M. Gray, 1905; John Smith, 1905; Matthew W. Macaulay, 1906; Abraham Blashky, 1906; Simon H. Bloom, 1906; Farquhar Matheson, 1906.

THOMAS HUTCHESON BURSARY (*Theology, Law, or Medicine*).—This Bursary, formerly known as the Old Library Bursary, was founded by Mr. Thomas Hutcheson of Lambhill in 1641. Preference was given to a son of a burgher, particularly one of the name Hutcheson or Herbertson. The Patrons are the Magistrates and Town Council of Glasgow. Ordinance No. 83 of the Universities Commission (1889) prescribes that the Bursary shall be called the Thomas Hutcheson Bursary, and that it shall be lawful for the Patrons to appoint to it, without preference as to name or birth, any Master of Arts who is entering on his course of study in any one of the Faculties of Divinity, Law, or Medicine. The Bursary is tenable for four years, but if a bursar in Divinity graduate at the end of three years, he shall only retain his Bursary during the fourth year of tenure if he shall engage in a course of study in Divinity approved by the Senate. Value £11 2s. 2½d. per annum. When a vacancy occurs, applications are to be lodged with the Town Clerk, City Chambers, not later than 1st September.

*Bursar*—William Howat, M.A., 1904.

HYNDFORD AND ROSS BURSARY (*Arts*).—In 1617 Mr. Michael Wilson founded a Bursary, called the Hyndford Bursary, for a student in Philosophy. The right of presentation belonged to the representative of Sir James Carmichael, viz., Sir W. C. Anstruther, Bart. In 1659 Captain William Ross of Rosseyle founded the Ross Bursary for a student in Languages and Philosophy. The appointment was vested in the Earl of Glasgow. By Ordinance No. 95 of the Universities Commission (1889), these two Bursaries were combined into one, to be called the Hyndford and Ross Bursary. It is tenable for four years, but if the bursar graduate at the end of three years, he shall only retain his Bursary during the fourth year of tenure if he engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. The patronage of the Bursary is vested in Sir W. C. Anstruther, Bart., and his heirs, and the Earl of Glasgow and his heirs, who exercise their right of presentation by turns. The

<sup>1</sup> Vacant through lapse of time.

appointment in 1905 belonged to the latter. In other respects the provisions of Ordinance No. 57 apply to the Bursary. Value £10 16s. 8d.

*Bursar*—William C. Love, 1906.

JOHN FERGUSON JAFFREY BURSARY IN MENTAL PHILOSOPHY (*Arts*).—This Bursary, founded in 1877, is of the annual value of £34, and shall be awarded to a student on entering the third session of his attendance, *i.e.* a student who has attended at any of the Scottish Universities during each of the two previous sessions at least two classes in the Faculty of Arts other than the classes of Logic, Moral Philosophy, and English Literature, or who having passed the Preliminary Examination in Humanity and Greek, has attended for one session the higher classes in those subjects, and who proposes to attend in the following sessions the classes of Logic, Moral Philosophy, and English Literature. Candidates are examined in such subjects in English Literature and Logic as may be fixed by the Senate. The examiners are the Professors of English Literature, Logic, and Moral Philosophy. The Bursary shall, as a rule, be tenable for two years, but on condition that the Bursar, during the two years of his tenure, shall complete his attendance on the classes of Logic, Moral Philosophy, and English Literature, and shall also attend one at least of the advanced classes taught by the Professors of Logic and Moral Philosophy, and shall pass the examinations in Logic, Moral Philosophy, and English Literature for graduation in Arts. The subjects of examination are—1. *Logic*: (a) Descartes, *Meditations*, (Veitch's translation); (b) Ferrier, *Lectures on Greek Philosophy*, the pre-Socratic period; 2. *English Literature*: (a) Shakespeare, *Coriolanus*, *The Tempest*; (b) Pope, *Essay on Criticism*, *Essay on Man*; (c) Burke, *Speech on Conciliation with America*. Candidates are not expected to deal with questions of textual criticism in the case of the works in English Literature. There will be a competition in November, 1907.

*Bursar*—Campbell Stephen, 1905.

MALCOLM KERR BURSARIES (*Science, etc.*).—Two in number, founded in 1874, and consisting each of half the free annual proceeds of a sum of £1,000, bequeathed by the late Mr. Malcolm Kerr, stationer in Glasgow. One of the Bursaries is in Natural Philosophy, the other in Chemistry. The Bursaries are given on examination, and are tenable for three years, provided the Bursars continue for so long to prosecute in the University Laboratories, to the satisfaction of the Senate, the study of Natural Philosophy and Chemistry respectively. The subjects of examination in Natural Philosophy are the same as those for that subject

1 Vacant through lapse of time.

in the examination for the ordinary degree of M.A., and in Chemistry, the same as those for the Final Science Examination for B.Sc. Present value, £22 to each Bursar.

*Bursars*—Andrew Henderson, M.A. (Chemistry), 1906; John Jackson and John M'Whan (Nat. Phil.), 1906.

**THE KINTYRE (KER) BURSARY** (*Any Faculty*).—This Bursary founded in 1862 by Robert Ker, Esq., of Auchinraith, merchant in Glasgow, originated in the Founder's desire "to increase the opportunities of acquiring knowledge to the natives of Kintyre."

The Office-bearers of the Kintyre Club were appointed Patrons. By the Deed of Mortification, the free proceeds of a sum of £500 sterling—about £20 sterling—were appointed to be paid to a student to be nominated by them, and who should enjoy the said Bursary for the term of three years while prosecuting his studies at the Glasgow University, with power to the Patrons to determine, in every case, whether the Bursary should be granted for a longer or shorter period than three years, but in no instance is it to be granted for a longer period than four years to the same student. No restriction is placed upon the student as to his profession or calling. Applicants must be connected with Kintyre, and be entering the University for the first time. When a vacancy occurs application should be lodged with the Honorary Secretary of the Kintyre Club, R. Harvey Pirie, LL.B., 173 St. Vincent Street, Glasgow, on or before 10th June. (Vacant).

**THE KINTYRE (ALEXANDER LOVE) BURSARY** (*Any Faculty*).—This Bursary was founded in 1890 by the family of the late Alexander Love of Campbeltown. It consists of the free proceeds of a sum of £300 sterling—about £11—and is administered by the Office-bearers of the Kintyre Club. The Bursar must be a native or the son of a native of Kintyre, or actually resident there, and entering upon his first session at the University. His circumstances must be such as to render aid important. The period of tenure is not to exceed four years. When a vacancy occurs application should be made to the Hon. Sec. of the Kintyre Club, R. Harvey Pirie, LL.B., 173 St. Vincent Street, Glasgow, on or before 31st May. (Vacant).

**LAING BURSARY OR BURSARIES** (*Arts*).—The late Alexander Laing, LL.D., some time Professor of Mathematics in Anderson's College, Glasgow, who died in 1882, bequeathed to trustees the sum of £500 to found one or two Bursaries in the Faculty of Arts. The trustees by a deed dated 26th July, 1883, conveyed to the Senate the sum of £500 of the preference 4 per cent. stock of the Glasgow and South-Western Railway Company, under certain conditions and regulations. The foundation is for providing, in the option of the Senate, one Bursary of £20, or two of £10 each. The Bursary is open to competition to all students entering on their first session in the Faculty

of Arts (a preference being given, *cæteris paribus*, to natives of Brechin). The period of tenure is three years. Should the Bursary become vacant otherwise than by lapse of time, the income of the fund during the vacancy is to be added to capital.

*Bursar*—<sup>1</sup> Archibald Mathieson, 1905.

**JAMES LAING BURSARIES (*Arts*).**—Founded in 1892, under the Trust Disposition and Settlement of Mr. James Laing, Writer, Denny. So far as the funds admit, the Trustee appoints annually to two Bursaries, each of the annual value of £25, and tenable for four years. They are open to candidates (male and female) who have been educated for at least three years in any school or schools in the County (including the Burgh) of Stirling, and who are entering upon their first or second year of study in the University of Glasgow. Applications with certificates of qualification and good conduct from the teacher or teachers under whom candidates have been educated, should be lodged with Mr. William Jenkins, Writer, Denny, not later than 1st September. The names of candidates who are found qualified will be sent by him to the Clerk of Senate that they may be entered at the University competition for Bursaries. Failing candidates qualified as above, the Bursaries are open to competition to students of the first or second year from any part of Scotland. (Two vacancies.)

*Bursars*—<sup>2</sup> Robert Craig, 1903 ; <sup>2</sup> Jean G. Stephen, 1903 ; John Robb, 1904 ; William Thomson, 1904 ; John R. Peddie, 1905 ; Euphemia D. Gordon, 1905 ; Thomas H. Calder, 1906 ; Andrew M'Allan, 1906.

**LAMB BURSARY (*Arts or Theology*).**—Founded in 1863 by the late Rev. Dr. William Lamb, minister of Carmichael, and appropriated to a student in Arts or Divinity. Bursar appointed by the Minister and Kirk Session of Carmichael. The preference to applicants in the parish of Carmichael or Pettinain, and the restriction to applicants from the Presbytery of Lanark, were cancelled by Ordinance No. 57 of the Universities Commission (1889). Value, about £12 per annum.

*Bursar*—Henry J. C. Gibson, 1905.

**LANFINE BURSARIES (*Arts*).**—By the will of the late Miss Martha Brown of Lanfine a sum of £5000 was bequeathed in 1902 to this University, “to be applied in payment of Bursaries tenable for not more than four years, of not less than £25 and not exceeding £40 each per annum, to be held by students who have passed a competitive examination in classes connected with the Faculty of Arts under such conditions as the Principal and Senatus of Glasgow

<sup>1</sup> Vacant by resignation of Bursar.

<sup>2</sup> Vacant through lapse of time.

may from time to time prescribe, the said Bursaries to be called the Lanfine Bursaries."

The following regulations were adopted by the Senate on 19th February, 1903 :—

1. There shall be six bursaries, each of the annual value of £27, and each tenable for two years.

2. They shall be held by students of either sex who, having passed the full Preliminary Examination in Arts, are pursuing a course for graduation with Honours.

3. Three bursaries shall be awarded annually in the following alternating order :—In April, 1904, and thereafter biennially (1908), one bursary in each of the following Groups of Honours, viz. Mental Philosophy, Modern Languages, English; in April, 1905, and thereafter biennially (1909), one bursary in each of the following Groups of Honours, viz. Economic Science, History, Semitic Languages.

4. (a) Candidates for the bursary in Mental Philosophy must be attending the ordinary class in Logic or in Moral Philosophy, and the bursary shall be awarded to the candidate who, in the year of competition, is highest in the honour list of the Ordinary Logic Class at the first vacancy (1904), of the Ordinary Moral Philosophy Class at the second vacancy (1906), and so on alternately.

(b) Candidates for the bursary in Modern Languages must be attending the ordinary class in French or in German, and the Bursary shall be awarded to the candidate who, in the year of competition, is highest in the honour list of the Ordinary French Class at the first vacancy (1905), of the Ordinary German Class at the second vacancy (1907), and so on alternately.

(c) Candidates for the bursaries in English, Economic Science, History, and Semitic Languages, must be attending the ordinary classes in English, Political Economy, History, and Hebrew respectively, and the bursary in each case shall be awarded to the candidate who, in the year of competition, is highest in the honour list of the class which, as a candidate, he is required to attend.

5. The first moiety of each bursary shall not be paid to the bursar until he produces a certificate bearing that he is attending an Honours Class in the Group in connection with which he has been appointed to the bursary; and the last moiety of each bursary shall not be paid to the bursar until he has obtained the Degree of Master of Arts with Honours in the Group in connection with which he holds his bursary.

6. If in any year bursaries allocated to any of the above Groups are not awarded, such bursaries shall, in the succeeding year, be open to competition in the Groups of (a) Classics and (b) Mathematics and Natural Philosophy, and the award shall be made on the

same principles as in the case of the bursaries in Mental Philosophy and Modern Languages.

7. A Lanfine Bursary shall not be held along with another bursary.

*Bursars*—<sup>1</sup>Arthur E. Macgregor (Econ. Sc.), 1905; <sup>1</sup>Jessie D. Borthwick (Hist.), 1905; Leonard J. Russell (Ment. Phil.), 1906; Isabella M. Ross (Mod. Lang.), 1906; William D. Taylor (English), 1906; John S. Boyd (Econ. Sc.), 1907; Henry Cook (Hist.), 1907; Louis C. Phillips (Semitic Lang.), 1907.

**LEADBETTER BURSARY** (*Arts*).—This Bursary was founded in 1855 by Mr. John Leadbetter, merchant, Glasgow. It was made tenable for four years, and the classes to be attended by the Bursar in each of the four years were prescribed. A preference was given to boys who had attended the five years' Classical Course of the High School of Glasgow. Patrons—The Lord Provost and Magistrates. Ordinance No. 88 of the Universities Commission (1889) empowers the Patrons to present to the Bursary any person who has completed the five years' Classical course of the High School of Glasgow, whom failing, any person, without restriction as to parentage, who has received a similar classical education elsewhere. The Bursar must attend the Latin and Greek classes in the University during at least one year, and thereafter continue a course of study in the University necessary for the Degree of Master of Arts. The Bursary is tenable for four years, but if the holder graduate at the end of three years he shall only retain his Bursary during the fourth year of tenure if he shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. In other respects the provisions of Ordinance No. 57 apply to this Bursary. When a vacancy occurs, applications are to be lodged with the Town Clerk, City Chambers, not later than 1st September.

*Bursar*—David C. Watson, 1906.

**ARCHBISHOP LEIGHTON BURSARY** (*Arts and Theology alternately*).—Robert Leighton, Archbishop of Glasgow, founded in 1681 two Bursaries, which were tenable for four years in Philosophy, and two or three years in Divinity. By Ordinance No. 86 of the Universities Commissioners (1889), the two Bursaries were combined into one of the annual value of £18, to be called the Archbishop Leighton Bursary. An appointment is made of a Bursar in the Faculty of Arts, and at the end of his period of tenure an appointment in the Faculty of Divinity, and so on alternately, the period of tenure in each case being three years, and a person who has held the Bursary in Arts being eligible for appointment also in Divinity. The appointment in 1907 will be for three years in Philosophy

<sup>1</sup> Vacant through lapse of time.



The provisions of Ordinance No. 57 apply to this Bursary. When a vacancy occurs, two students are nominated by the Town Council, and examined by the Senate, who prefer the best scholar. Applications must be lodged with the Town Clerk, City Chambers, on or before 1st September. (Vacant.)

**JOHN LEYDEN BURSARY (*Arts*).**—Founded in 1879 by the Glasgow Border Counties Association in memory of John Leyden, poet and scholar. The Fund consists of the sum of £429 3s. 8d. raised by subscription. The Bursary is open to free competition under the same regulations as the competition Bursaries in the University. Tenable for three years. The holder to pass through the Arts course, and at the termination thereof to take the Degree of M.A.

*Bursar*—George Hope, 1905.

**JAMES LOCHHEAD BURSARY (*Arts*).**—Founded in 1886 in terms of the Trust Disposition and Settlement of Mrs. Robina Mitchell, who bequeathed £500 for that purpose, in memory of her brother, who died in Ohio. A preference is given to students of the name of Lochhead, whose parents are members of the Established Church of Scotland, whom failing, to students whose parents are members of the said Church. The Bursary is tenable for three years in the Faculty of Arts.

*Bursar*—James M. Wordie, 1906.

**LOCHHEAD AND MITCHELL BURSARIES (*Arts*).**—Two in number and of equal value, founded in 1886, in terms of the Trust Disposition and Settlement of Mrs. Robina Mitchell, who bequeathed £2,000 (free of legacy duty) for that purpose. The present annual value is £33 to each bursar. A preference is given to students of the name of Mitchell or Lochhead, whose parents are members of the Established Church of Scotland, whom failing to students whose parents are members of the said Church. They are tenable for four years in the Faculty of Arts.

*Bursars*—<sup>1</sup> William J. Merry, 1903 ; William Mitchell, 1904.

**LOGAN BURSARIES (*One in Theology and One in Medicine*).**—Two in number, one in Divinity and one in Medicine, founded in 1863, by Mrs. Logan, widow of Mr. William Logan, tinsmith in Glasgow. The Bursary in the Faculty of Divinity is tenable for three years, and the one in the Faculty of Medicine for four years. The preference to the names Logan and Johnstone was cancelled by Ordinance No. 57 of the Universities Commission (1889). The value of each is £17 per annum. Appointment by the Senate.

*Bursar in Theology*.—<sup>1</sup> Archibald Campbell, 1904.

*Bursar in Medicine*.—Thomas J. Mackie, 1905.

<sup>1</sup> Vacant through lapse of time.

LORIMER BURSARIES (*Four in Theology, Four in Medicine, and Eight in Arts*).—By Trust Disposition and Settlement of date 17th October, 1872, the late Mr. John Lorimer, merchant in Glasgow, directed his Trustees to make over to the Principal and Professors of the University of Glasgow, the residue of his estate, amounting to the sum of £8,594 5s. 5½d., the annual proceeds of £5,000 thereof to be applied in payment of Bursaries of an amount not exceeding £50 each, and tenable for three years. One Bursary at least is to be payable to a matriculated student of each of the following subjects:—1, Theology; 2, Medicine; 3, Philosophy; 4, Mathematics; and the proceeds of the remainder of such residue are to be applied in payment of smaller Bursaries tenable by students of the above-mentioned subjects.

The following regulations have been adopted by the Senate:—

1. The Bursaries shall be sixteen in number—namely, eight of the annual value of £24, and eight of the annual value of £16, and shall be tenable for three years.

2. Four Bursaries—viz., two at £24, and two at £16 shall be held by Students of Theology, and shall be open to competition to students entering the Divinity Hall. The second moiety of the third year's Bursary shall not be paid until the Bursar shall have passed the examinations for the degree of B.D.

3. Four Bursaries—viz., two at £24, and two at £16, shall be held by Students of Medicine, and shall be open to competition to students who have attended the first session of their professional study in the University of Glasgow. The subjects of examination, which shall be prescribed by the Faculty of Medicine, are Elementary Anatomy, Elementary Chemistry, and Botany. The examinations are held at the same times as the Autumn Professional Examinations in these subjects, and, in the case of Chemistry and Botany, on the same papers. The second moiety of the third year's Bursary shall not be paid until the Bursar shall have passed his Third Professional Examination for the degree of M.B.

4. Four Bursaries—viz., two at £24, and two at £16, shall be open for competition to students who, having passed their whole Preliminary Examination, are entering on their second session of attendance, and who, not having attended the classes of Logic, Moral Philosophy, and English Literature, propose to attend these classes in the following sessions. Candidates shall be examined in such subjects in English Literature and Logic as may be fixed by the Senate. The Examiners shall be the Professors of English Literature, Logic, and Moral Philosophy. Each Bursar must attend two classes in the Faculty of Arts. Immediately on his appointment, he must enter one or more of the classes of English Literature, Logic, and Moral Philosophy, and in the course of his tenure of his Bursary must attend, besides the above classes, one or more of the

Honours classes in English Literature, Logic, or Moral Philosophy. The second moiety of the third year's Bursar shall not be paid until the Bursar shall have passed examinations in Logic, Moral Philosophy, and English for graduation in Arts.

5. Four Bursaries—viz., two at £24, and two at £16, shall be open for competition to students of either sex who, having passed the whole Preliminary Examination, are entering on their second session of attendance. Candidates shall be examined in such subjects in Mathematics as may be fixed by the Senate. The Examiners shall be the Professors of Mathematics and Natural Philosophy. Each Bursar must attend two classes in the Faculty of Arts. Immediately on his appointment he must enter the class of Mathematics, and prosecute the course of study required for passing the Honours examinations in Mathematics and Natural Philosophy for a Degree in Arts. The second moiety of the third year's Bursar shall not be paid until the Bursar shall have passed the examinations in Mathematics and Natural Philosophy for graduation in Arts or the First Science Examination in these subjects for graduation in Science.

In session 1907-8 four of the above £24 Bursaries will be open to competition—viz., one in Theology, one in Medicine, one in Philosophy, and one in Mathematics. The Bursary in Theology will be decided by the results in the general competition for Bursaries in Theology. The competition for the Bursary in Medicine will be held on 30th September and 1st October, 1907. For the Bursaries in Philosophy the subjects of examination will be those prescribed for the John Ferguson Jaffrey Bursary (see p. 350), and the examination will take place along with the Autumn examinations for M.A. in English and Logic. The examination for the Bursaries in Mathematics will take place along with the Arts and Science Preliminary Examination in Mathematics, but may embrace higher papers.

*Bursars in Theology*—<sup>1</sup>Alexander Moffatt, M.A., 1904; Thomas S. Glen, 1905; John Smart, 1905; Robert E. Lee, M.A., 1906.

*Bursars in Medicine*—<sup>1</sup>John Cruickshank, 1904; John A. M. Cameron, 1905; Hyacinth B. W. Morgan, 1905; Charles L. Sutherland, 1906.

*Bursars in Arts*—<sup>1</sup>Donald Stalker (Phil.), 1904; <sup>1</sup>David B. Meek (Math.), 1904; David Ogg (Phil.), 1905; Hugh A. Reyburn (Phil.), 1905; Janet McCabe (Math.), 1905; James M. Moir (Phil.), 1906; Caleb A. Stewart (Math.), 1906.

**LUMSDEN BURSARY** (*Theology*).—This Bursary was founded in 1850, by Mr. James Lumsden, stationer, Glasgow. Value, £15. It is given to a Divinity student of the first year, and may be held

<sup>1</sup> Vacant through lapse of time.

for four years. There is a preference to sons of members, or of deceased members of the Stationers' Company of Glasgow. The Patrons, viz., the Principal, the Professors of Divinity, Hebrew, and Church History, and the President of the Stationers' Company—have resolved that when no candidate with a preferential claim applies for the Bursary it shall be awarded in accordance with the results of the competition for Bursaries in Theology.

*Bursar*—Alexander Maclean, M.A., 1906.

**LUSK BURSARY (*Arts*).**—Founded in 1876, in accordance with holograph settlement executed by Mr. Robert Lusk, merchant in Greenock, who bequeathed the sum of £1,000, reduced by legacy duty to £900, for "a Bursary in connection with the Glasgow University, to be given to the most successful student attending the preparatory course of studies in said University who may intend to follow out the ministry in connection with any of the Presbyterian bodies in Scotland," "and who may, on public examination or competition, be found to be best qualified and most deserving." The competition is open to first or second year's students in Arts. Tenable for three years, but may be continued for an additional year. Value, £35 per annum.

*Bursar*—George A. M. Dickson, 1905.

**MACARTHUR BURSARY (*Medicine*).**—Founded in 1881 by Miss Jean Macarthur, in memory of her uncle, John Macarthur, Doctor of Medicine in Glasgow. The Bursary consists of the annual proceeds of £500. The administration is vested in a Committee appointed annually by the Faculty of Physicians and Surgeons of Glasgow. The Bursary must be held by a student prosecuting the study of Medicine in the University of Glasgow. Under the rules laid down by the Committee, applicants must have completed three winter sessions of medical study, and not have entered on the fourth winter session. Preference will be given to applicants who have taken one or more First Class Certificates in the Medical Classes. The Bursary is tenable for two years.

Application to be made prior to 15th April, 1907, to Alexander Duncan, LL.D., Faculty Hall, 242 St. Vincent Street, Glasgow, who will furnish forms of application.

*Bursar*—David A. Thomson, M.A., 1905.

**MC'RIE BURSARIES (*Arts*).**—These Bursaries were founded by the Rev. James Mc'rie, D.D., of Dangart, Senior Minister of the U.P. Congregation of Old Meldrum, in the County of Aberdeen. They are of the annual value of £25, tenable for four years, provided the holder passes a prescribed examination at the commencement of each session and complies with the other conditions mentioned in the Deed of Foundation. The Bursary fund consists of certain

lands in the parish of Colmonell and other heritable and movable property mortified for the purpose and vested in the Magistrates and Town Council of Ayr. The candidates must have been born in the parishes of Ballantrae, Colmonell, Barr, Girvan, Ayr, Old Meldrum, Tarves, Daviot or Bourtie, or in the City of Aberdeen, or in the Town of Ayr. The students must also be the sons either of mechanics, or of cottars, or of farmers not paying more than £100 of yearly rent, or of ministers not having more than £130 of yearly income, without respect to religious sect or denomination. Candidates of the names of M'Crie, Forsyth, M'Cracken, or Spark, are to have a preference if otherwise deserving. The Bursaries may be held along with other Bursaries. Forms of application may be obtained from Mr. P. A. Thomson, Town Clerk, Ayr, and should be lodged with him on or before the first day of September in each year in which a vacancy occurs. The names of candidates who are found to possess the prescribed qualifications will be sent by him to the Clerk of Senate that they may be entered at the University competition for Bursaries for students of the first year.

*Bursars*—William G. Johnston, 1904; James A. Ramsay, 1904; John Goudie, 1906.

**JAMES MELVILLE M'CULLOCH BURSARY (Arts).**—Founded in 1885 in memory of the late Rev. James Melville M'Culloch, D.D. minister of the West Parish, Greenock. It consists of the free annual income of about £400. It is open to competition to students of the first year in the Faculty of Arts, who shall have been educated for not less than three years at any school or schools in Greenock. Tenable for four years, the Bursar attending the qualifying course for the Degree in Arts. The second moiety of the fourth year's Bursary shall not be paid until the Bursar shall have passed all the examinations required for the Degree of Master of Arts. In the event of a vacancy occurring otherwise than by lapse of time, the Senate may appoint a student of the same standing qualified in like manner, or may arrange a new competition.

*Bursar*—David Buchanan, 1906.

**MACDONALD BURSARIES (Arts, Law, or Medicine).**—Two in number, founded in 1882, in terms of the Trust Disposition and Settlement of Mr. Alexander Macdonald, M.P., who bequeathed to the University £1,000 for the purpose of assisting students in a course of purely secular education. The Bursaries are equal in value and tenable for four years in Arts, Law, or Medicine. Only miners under the age of twenty-one years, who have worked underground in any part of the United Kingdom, are eligible as candidates. The Bursaries are awarded in accordance with the results of an examination in general knowledge, particularly in writing, arithmetic, geography, grammar, and history.

*Bursars*—Thomas M'Vittie, 1904; Andrew M'Vittie, 1906.

**JOHN AND ISABELLA MACDOUGALL BURSARIES (*Arts*).—**Founded in 1884, under the Trust Disposition and Deed of Settlement of Miss Isabella Macdougall, Perth. Miss Macdougall directed her Trustees to devote the residue of her means and estate to the foundation and endowment of one or more Bursaries, payable to students born in the county or city of Perth, attending the classes in the Faculty of Arts, in the Universities of Edinburgh, Glasgow, and St. Andrews. The Bursaries are of the annual value of about £33, and are tenable for a period not exceeding three years. The Trustees are the Patrons. The candidates, who may be of any religious denomination, must undergo an examination by examiners appointed by the trustees. The Bursaries are open to students who are either (1) about to enter on their first session, and who shall pass the Preliminary Examination in Arts, or (2) who have already attended the junior classes for one session. A vacancy occurring otherwise than by lapse of time may be filled up by the appointment, after examination, of a student of equal standing with the retiring Bursar. It is not competent for any person to hold any of these Bursaries along with any other Bursary or appointment yielding to him an annual income of fifty pounds or upwards. The Trustees are the following ministers in Perth, viz.:—The Rev. Walter E. Lee, East Church Parish; the Rev. F. H. Martin, St. Paul's Parish; the Rev. Peter R. Landreth, West Church Parish; the Rev. J. M. Scott, Middle Church Parish; and their successors in office for the time being, Mr. Thomas Soutar, retired banker, and Mr. Wm. Cochrane Young, solicitor in Perth. Candidates are requested to send in their names and addresses to Mr. Young, 9 St. John Street, Perth, on or before 1st September. (One vacancy.)

*Bursars*—<sup>1</sup>John M. Martin, 1904; <sup>1</sup>Andrew Stewart, 1904; Alexander Macgregor, 1906; William M. Smart, 1906.

**MALCOLM M'EWEN BURSARY (*Arts or Science*).—**Mr. William M'Ewen, tobacco manufacturer, Glasgow, who died on 16th December, 1878, by his Trust Disposition and Settlement dated 28th November, 1878, directed his trustees, Mr. James Boyd, writer, Glasgow, and others, to devote a sum of £500 to the foundation of a Bursary in the University of Glasgow, to be called the "Malcolm M'Ewen Bursary," in memory of his brother, Mr. Malcolm M'Ewen, who died on 16th January, 1878. The Bursary was founded in 1884. After consultation with the Senate, the Trustees resolved that the regulations for the Bursary should be as follows:—The Bursary is open to competition at the annual Bursary Examination to all students entering on the first session of attendance at the University, is awarded by the Senate in accordance with the results of that examination, and is tenable for four years. The Bursar on his

<sup>1</sup> Vacant through lapse of time.

appointment must elect to follow either the course of study qualifying for the Degree of M.A., or the course of study qualifying for the Degree of B.Sc., and must attend at least two classes each winter session. The Bursary is payable by equal moieties on the second day of February, and at the close of the winter session, but the second moiety of the fourth year's Bursar shall not be paid until the Bursar shall have passed all the examinations for the Degree appropriate to the course of study chosen by him at the beginning of his tenure of the Bursary. A vacancy occurring otherwise than by lapse of time may, in the discretion of the Trustees, either be filled up at the first term thereafter, or not till the usual term at which the competition for the Bursary would, in ordinary course, have fallen due, and, in the latter event, accumulations from this source are to be added to the capital fund.

*Bursar*—Alexander S. Fulton, 1905.

**JAMES MACFARLANE BURSARY** (*Theology*).—Miss Helen Macfarlane, who died on 12th March, 1886, by a Codicil dated 15th August, 1882, to her Trust Disposition and Settlement, directed her Trustees to hand over to the Senate the Portrait of her late brother, Dr. John Macfarlane, Professor of the Practice of Medicine in this University, and the sum of £1,000 free of legacy duty for the foundation of a Bursary in the Faculty of Theology, in memory of her brother, the Rev. Dr. James Macfarlane, minister of Duddingston. Preference to the name Macfarlane. The competition is open to Divinity students of the first year, who hold a Degree in Arts of any Scottish University, or who have passed their examinations in any four subjects taken out of at least two departments for graduation in Arts. The Bursary is now of the annual value of £25, and is tenable for three years. In the case of a vacancy occurring otherwise than by lapse of time, the Senate may appoint, with or without examination, a student of the same standing as the previous Bursar.

*Bursar*—<sup>1</sup> John Macfarlane, 1904.

**JOHN MACFARLANE BURSARY** (*Medicine*).—Founded in 1874 by the brothers and sister of the late Dr. John Macfarlane, Professor of the Practice of Medicine in this University, and to his memory. Patrons—The Faculty of Medicine. It is of £40 annual value, and it is tenable for three years. The competition is open to students who have attended the first session of their professional study in the University of Glasgow. The subjects of Examination to be prescribed by the Patrons; and the success of the candidates in the examination in General Education will form an essential element of the decision. Any surplus which may accumulate from vacancies or otherwise, is to be applied to establish a "Macfarlane Prize" in the Class of Practice of Medicine. The subjects of Examination

<sup>1</sup> Vacant through lapse of time.

for this Bursary are Elementary Anatomy, Elementary Chemistry, and Botany. The examinations are held at the same times as the Autumn Professional Examinations in these subjects, and in the case of Chemistry and Botany on the same papers.

*Bursar*—William M'Adam, M.A., 1905.

ROBERT MACFARLANE BURSARIES.—By a Mutual Trust Disposition and Settlement of date 7th January, 1888, Miss Mary Ann and Miss Margaret Macfarlane directed their Trustees to make over to the Senate of the University of Glasgow a sum of £3,000 for the foundation of Bursaries in memory of their brother, Robert Macfarlane, Writer, Paisley, out of the estate bequeathed by him to them. The following regulations, giving effect to the provisions of the Trust Deed, were adopted by the Senate on 6th April, 1905, and approved by the University Court on 4th May, 1905, viz. :

1. The Bursaries shall be called the Robert Macfarlane Bursaries, and shall be three in number, of equal annual value.

2. In awarding the Bursaries the Senate shall give a preference to young men connected with Paisley.

3. One Bursary shall be tenable for three years in either Arts or Law, and the appointment shall be determined by the General Bursary competition in Arts. Candidates for this Bursary must satisfy the Senate that they are looking forward to be lawyers.

4. One Bursary shall be given for proficiency in Scots Law, shall be awarded on the report of the Professor at the close of the winter session, and shall be tenable during the following year while the Bursar is attending some class or classes in the Faculty of Law not attended in a previous year ; provided that the minimum attendance given by the Bursar be on one class of eighty lectures or on two classes each having forty lectures.

5. One Bursary shall be given, *mutatis mutandis*, for proficiency in Conveyancing.

These Bursaries are not tenable along with another Bursary or Money Prize.

*Bursars*—John O. Taylor, 1905 ; William B. Hardie (Scots Law), 1907 ; Walter Hubbard, M.A. (Conveyancing), 1907.

MACGROUTHER BURSARIES (*Arts*).—Two in number, founded in 1872, the one by Mrs. Sophia Susan MacGronther, widow of Mr. James MacGronther of Leigham Court Road, Streatham, Surrey, who mortified in favour of certain trustees the sum of £500 ; the other by the Misses Mary and Jane MacGronther, residing in Glasgow, his sisters, who also mortified in favour of the same trustees the sum of £500, for the purposes of the foundation, and in memory of, and in fulfilment of the intentions of, the said James MacGronther. The Senate are the Patrons. The Bursaries are open to competition to students entering the Faculty of Arts for the



first time, and are awarded to students who, having passed the Arts Preliminary, have gained the highest marks in Mathematics in the Bursary examination, and have not obtained a bursary in the general competition. They are tenable for four years, subject in each case to the condition that the Bursar shall pass the examinations required of students proceeding to the Degree of M.A. An appointment to the £20 Bursary will be made in October, 1907.

*Bursar*—Robert C. Gray (Math.), 1905.

**M'KECHNIE BURSARIES** (*Any Faculty*).—Two in number, founded by the Trust Disposition and Settlement of the late Thomas M'Kechnie, merchant in Girvan, who bequeathed for that purpose the sum of £2,000 to the Minister of the Established Church in Girvan, the Magistrates of Girvan, and others, and appointed them patrons of the Bursaries. The Patrons, in nominating and presenting students to the Bursaries, are instructed to prefer, in the first place, such as are of the founder's kindred; secondly, such as are of the name of M'Kechnie; and thirdly, such as were born in the parish of Girvan, provided that such students are properly qualified by their previous education for entering the University of Glasgow. Failing candidates qualified as above, the Bursaries are to be awarded to those who shall be found best qualified and deserving. The Bursaries are tenable for four years. When a vacancy occurs application should be made to Messrs. W. and D. Andrews, solicitors, Girvan, early in August.

*Bursars*—<sup>1</sup>John Brown (Arts), 1903; David F. Clark (Arts), 1904.

**MACKINTOSH MENTAL SCIENCE BURSARY** (*Medicine*).—Founded in 1889 by Dr. Donald Mackintosh of London, in memory of his brother, Dr. Alexander Mackintosh, for many years superintendent of the Royal Lunatic Asylum, Gartnavel. Value, about £31. Tenable for one year. The competition is open to matriculated students of medicine who have attended the Lectures on Insanity in the University, and will be awarded in accordance with the results of an examination conducted in June by the Professor of Practice of Medicine and the Lecturer on Insanity acting conjointly. The holder of the Bursary shall, while holding it, devote special attention to the practical study of Insanity to the satisfaction of the Faculty of Medicine.

*Bursar*—Thomas Miller, 1906.

**M'KISSACK BURSARY** (*Medicine, Arts, or Divinity*).—Founded in 1900 in terms of the Trust Disposition and Settlement of Mrs. Jane M'Kissack, Nairn, who bequeathed £750 for that purpose, in memory of her husband, Charles M'Kissack. The Patrons of the Bursary are the Provost and Bailies and the Ministers of the

<sup>1</sup> Vacant through lapse of time.

Presbyterian and Congregational Churches in the Royal Burgh of Nairn. The Bursary is tenable for four years, and is to be given to a medical student prosecuting his studies at any College, University, or Training Institute approved by the Patrons, in preparation for Christian mission work among the Jews. Failing a student in medicine, the Bursary may be given to a student in Arts or Divinity having the same object in view. Applicants must be of British nationality and not under seventeen years of age at the date of presentation. Preference, *ceteris paribus*, will be given to candidates of the name of M<sup>c</sup>Kissack, or natives of the counties of Elgin and Nairn, or candidates who have at any time resided for twelve consecutive months in these counties. An appointment to the Bursary will be made in September, 1907. Applications should be sent to Messrs. Lamb & Co., solicitors, Nairn, not later than 31st August, 1907.

MACLEAN TRUST BURSARIES (*Arts*).—Under the scheme for the administration of the Trust of the late Colonel Alexander Maclean, approved of by the Court of Session on 18th July, 1895, the Governors are authorised to apply a portion of the revenue of the Trust in payment of Bursaries of the yearly value of not less than £25 each, tenable for four years at any Scottish University. The Bursaries are open to students of either sex of the name of Maclean entering on the Arts curriculum, and are awarded by competitive Examination in such manner as the Governors shall determine. The Bursars must regularly attend at least two classes each winter session in the curriculum for a degree in the Faculty of Arts. But any Bursar who has held his Bursary throughout a three years' curriculum in the Faculty of Arts, and taken a degree in that Faculty, may continue to hold it during the fourth year in any other Faculty. The Governors are the Lord Provost and Magistrates of the City of Glasgow. Forms of application can be received in the month of April each year, from the Town-Clerk, Glasgow, with whom applications must be lodged. (Three vacancies.)

*Bursars*.—<sup>1</sup>Christina M. Maclean, 1903; <sup>1</sup>Ewen Maclean, 1903; <sup>1</sup>William A. Maclean, 1903; Mary K. M<sup>c</sup>Lean, 1904.

MAITLAND CLUB BURSARY.—In 1888 Dr. W. H. Hill and Mr. J. Wyllie Guild, the then surviving members of Council of the Maitland Club, disposed of the remainder of the stock of the Maitland Club publications, and in pursuance of resolutions passed at meetings of the Council held on 3rd and 17th August, 1870, handed over the proceeds (£140) to the Senate for Bursary purposes. The free income is to be annually bestowed without any competitive examination on such student as the Senate may consider deserving. No appointment will be made until the free annual income amounts to £5.

<sup>1</sup> Vacant through lapse of time.

**ALEXANDER MANDERSON BURSARY** (*Arts*).—Mrs. Margaret Manderson or Macintyre, Greenock, who died on 13th April, 1905, by her Trust Disposition and Settlement dated 17th February, 1903, bequeathed to the Senate of the University £500, free of legacy duty, to found a bursary to be called the Alexander Manderson Bursary in memory of her deceased brother. Candidates must be natives of the Lower Ward of Renfrewshire or have been educated for not less than three years in a school therein. The Bursary shall be open to students of the first year, both men and women, and awarded after a competitive examination in such subjects or subject in Arts as the Senate may from time to time prescribe. It is tenable for three years, subject to the condition that the second moiety of the Bursary for the last year shall not be paid until the bursar shall have passed all the examinations required for the ordinary Degree of M.A.

**MARSHALL BURSARIES** (*One in Theology and One in Medicine*).—Mrs. Barbara Lander or Marshall, relict of Alexander Marshall, wholesale stationer, Bell Street, Glasgow, by her Will dated 8th December, 1874, bequeathed to the Senatus of Glasgow University the sum of £1,600, under deduction of legacy duty, to found two Bursaries of equal value, one in Divinity and the other in Medicine. Tenable for four years. Preference to the name of Marshall, but provided "that the Principal and the Professors shall nominate and appoint such students only to the said Bursaries as they shall find, on such examination as they may appoint, to be properly qualified for entering upon the study of Divinity and Medicine at the said University." Present value, £16 per annum to each Bursar.

*Bursar in Medicine*—Alexander Leishman, 1904.

*Bursar in Theology*—<sup>1</sup>John D. Brown, M.A., 1904.

**MARSHALL TRUST BURSARIES** (*Arts*).—Under scheme 198, section 29, of the Educational Endowments (Scotland) Commission, approved by Her Majesty in Council, on 17th March, 1888, the Governors of the Marshall Trust are instructed to apply (1) a sum not exceeding £300 per annum in providing University Bursaries. These Bursaries are awarded by competitive examination among pupils of either sex who have held free scholarships or school bursaries under the scheme, and pupils of either sex who are resident and attending public or State-aided schools in Lanarkshire or Stirlingshire, whose parents or guardians are of the class specified in section 25 of the scheme. The Governors may apply (2) a further sum of £300 per annum in providing similar Bursaries to be awarded solely to pupils who have held free scholarships under the scheme, who shall have competed for but failed to obtain any of the first mentioned Bursaries, but on condition that such free scholars shall pass the examination prescribed by the Governors.

<sup>1</sup> Vacant—Bursar's course finished.

Each Bursary is £30 per annum, and is tenable for not more than five years. Forms of application may be obtained from the Secretary of the Trust—William Mitchell, LL.D., 134 Wellington Street, Glasgow—and should be lodged with him on or before the 1st day of September in each year. The names of candidates who are found to possess the prescribed qualifications will be sent by him to the Clerk of Senate that they may be entered at the University competition for Bursaries for students of the first year. The Bursaries will be awarded to those candidates highest in order of merit who fail to win a Bursary in the general competition. Under (1) there are two vacancies, and under (2) there are also two vacancies.

*Bursars*—<sup>1</sup> Margaret O. Taylor (1903), 1902; <sup>1</sup> Grace Oliphant, 1902; <sup>1</sup> Neil McCaig, 1902; <sup>1</sup> David Taylor, 1902; Thomas Hyslop, 1903; William Oswald, 1903; Donald J. Clark, 1903; Janet S. McCulloch, 1903; William Y. Colquhoun, 1904; Malcolm Manson, 1904; Robert Houston, 1904; Malcolm Littlejohn, 1904; John M. Short, 1905; Daniel W. Ritchie, 1905; Kenneth MacLean, 1905; Alexandrena Carswell, 1905; Benjamin McKenna, 1906; Stuart C. Parker, 1906; James Manson, 1906; Mary F. Campbell, 1906.

WILLIAM MEIKLEJOHN BURSARY (*Arts*).—See p. 413.

MENZIES BURSARIES (*Arts*).—The late Mr. James Menzies, of Glasgow, by his Will, dated 3rd November, 1837, left a sum of money to establish four Bursaries at either of the Universities of Edinburgh, Glasgow, or St. Andrews, tenable for four years, one to be given each year. The value of each Bursary is £45 per annum, but varies at the discretion of the Patrons. The Patrons are Sir Neil Menzies, Bart., of Menzies, and the Parish ministers of Dull, Weem, and Fortingall. In the first place, the kindred of the Testator; secondly, persons of the name of Menzies; thirdly, those born on the Menzies estates, will be preferred—provided always that they shall be found properly qualified by previous education; and failing these, the Patrons can present such as shall be found best qualified after due examination. The following are the subjects of examination:—*Latin*—Translation, (1) English into Latin; (2) Latin into English, with grammatical questions and exercises. *Greek*—Translation, Greek into English, with grammatical questions and exercises. *English*—(1) The growth, structure, and grammar of the language; (2) The History of English Literature; (3) A short essay on a prescribed subject. *Mathematics*—(1) Arithmetic, general; (2) Algebra, up to and including Quadratic Equations; (3) Geometry, Euclid, the first six books, and the first twenty-one propositions of the eleventh book, with deductions; (4) Trigonometry, up to and including the solution of triangles. Bursars to attend in some one of the above Universities the classes in their regular order for the M.A.

<sup>1</sup> Vacant through lapse of time.

Degree. Candidates are requested to send their names to Mr. Thomas Yool, The Menzies Estates Office, Aberfeldy, on or before 17th September.

*Bursars*—John S. Menzies (at Edinburgh University), 1903; David Millar, 1904; Arthur J. A. Menzies (at Edinburgh University), 1905; John W. Menzies (at Edinburgh University), 1906.

**MERCHANTS' HOUSE BURSARIES** (*One in Arts, One in Law, and Two in Medicine*).—Founded in 1879 by the Merchants' House of Glasgow. The Bursaries are of the annual value of £25 each, and are four in number—viz, two in Medicine, one in Arts, which may also be held in Engineering and Mechanics, and one in Law, tenable by students attending the requisite classes in the above Faculties, with a preference to the sons of matriculated members of the Merchants' House, and such others as the Lord Dean and Directors may deem deserving. 1. The Bursaries in Medicine are tenable for four years. Candidates must be entering on their first winter session of attendance on the ordinary curriculum for Medical Students. 2. The Bursary in Arts, or in Engineering and Mechanics, is tenable for four years. Candidates must be entering on their first session of study, and must attend each session two at least of the classes in the Arts curriculum, including, at the option of the candidate, the class of Civil Engineering and Mechanics. 3. The Bursary in Law is tenable for three years. Candidates must be entering on their first session of attendance on the classes in the Faculty of Law, and must give regular attendance for the three years on classes in that Faculty. The subjects of examination for the Bursaries in Medicine are the subjects of the Medical Preliminary Examination, and for the Bursaries in Arts and Law are those prescribed for the General Bursary Competition, special importance being given in the examination for the Arts Bursary to the subject of Mathematics. When a vacancy occurs, applications should be lodged with W. H. Hill, LL.D., Clerk to the Merchants' House, on or before 1st Sept.

*Bursar in Arts*—Peter Revie, 1906.

*Bursary in Law*—David H. Battersby, M.A., 1905.

*Bursars in Medicine*—<sup>1</sup>Walter Gilmour, 1903; John Gray, 1904.

**METCALFE BURSARIES** (*Science*).—Founded by the late Miss Sarah Metcalfe, Glasgow, who, by her Deed of Settlement and Codicils, dated respectively 8th August, 30th September, and 7th October, 1853, bequeathed, subject to the liferent of her brother, Mr. William Metcalfe, certain properties in Glasgow, "for encouraging poor students in prosecuting the studies of Mathematics, Practical Astronomy, Chemistry, and Civil Engineering." Mr. Metcalfe died on 25th January, 1869, and by resolution of date 14th April, 1870, the Senate instituted, besides a Metcalfe Fellowship of £100 annual

<sup>1</sup> Vacant through lapse of time.

value (for which see Index), at least two Metcalfe Bursaries or Scholarships, each of the annual value of £25, and tenable for two years, subject to the condition that the scholar attend the four classes of Civil Engineering, Senior Mathematics, Practical Astronomy and Chemistry ; two at least of these classes to be taken each year. The scholars to be appointed by examination in Pure Mathematics, including the elements of Plane Trigonometry, of Mechanics, and of Theoretical Astronomy, from among matriculated students entering the Intermediate Honours class of Mathematics, or the class of Chemistry. (Two vacancies.)

*Bursars*—Robert Frew, 1906 ; Harold G. Wigg, 1906.

MITCHELL (See Lochhead and Mitchell, p. 355).

MONTEITH BURSARIES (*Arts*).—Founded in 1869 by Mr. James Monteith of 38 Duke Street, St. James's, London. Three in number, each of the annual value of about £14, and tenable for three years. They are open for competition to all matriculated students of the Faculty of Arts, being natives of Scotland, and sons of Scottish parents, and may be held along with another Bursary. The examination to be in French and German in alternate years. Occasionally an extra Bursary will be given to the second-best candidate, of the same value as the others, but tenable only for one year. At the commencement of session 1907-8 a regular three years' Bursary will be competed for, the examination being in French.

*Bursars*—<sup>1</sup>William McMinn, 1904 ; Andrew Clark (French), 1905 ; John Robb (German), 1906.

JOHN MONTEITH BURSARIES (*Medicine*).—Founded in 1884 by Mrs. Helen Monteith, Greenbank, Dowanhill Gardens, Glasgow, in memory of her husband, the late John Monteith. Mrs. Monteith assigned the sum of £1,000 to Dr. John Gray M'Kendrick, Professor of the Institutes of Medicine, Dr. James Duncan M'Laren, Fellow of the Faculty of Physicians and Surgeons in Glasgow, the late James Graham, LL.D., writer, Glasgow, and Robert Monteith, her adopted son, as trustees, in the first instance, for the administration of the fund. The annual income after payment of the expenses of administration is to be awarded as two Bursaries to students who have attended the first and second sessions of their professional studies in the University of Glasgow with a view to Graduation in Medicine in that University. The Bursaries are tenable for two years. One Bursary is awarded annually in the month of November, and is given to the candidate who gains the highest number of marks in the subjects of Anatomy and Physiology at the Professional Examinations in these subjects held during the previous year (*i.e.* the April and October preceding said month of November). The founder has directed that it be represented to the holders of the

<sup>1</sup> Vacant through lapse of time.

Bursaries that they should feel themselves in honour bound after graduation to render professional assistance to the poor as much as may lie in their power.

*Bursars*—<sup>1</sup> David A. Thomson, M.A., 1905 ; Robert M. Walker, 1906.

**MORGAN BURSARIES** (*Arts and Theology*).—Mr. John Morgan, West India Merchant, who died at Springfield House, Bishopbriggs, on 4th May, 1894, in his Trust Disposition and Settlement directed the Merchants' House to pay over half-yearly to the Presbytery of Glasgow one third of the net revenue of his estate to be applied in providing Bursaries for students in the University of Glasgow intending to become ministers of the Church of Scotland, one third to students in Divinity and two thirds to students in Arts. The students in Arts must be under twenty years of age, and must have passed the Preliminary Examination. The appointments are made for one year only, but may be renewed from year to year for one or more years. No Morgan Bursary shall exceed £20 a year. The holder of another Bursary of £20 or upwards cannot be appointed to a Morgan Bursary, but the holder of a Bursary of less than £20 may be appointed to a Morgan Bursary of such value that the two Bursaries together shall not exceed £20. Further particulars and schedules to be filled up by applicants may be obtained from the Presbytery Clerk.

**MUIR BURSARIES** (*Two in Arts or Science, Two in Science, and One in Theology*).—Founded in 1880, in terms of the Trust Disposition and Settlement and Codicil thereto of the late Mr. Matthew A. Muir, merchant in Glasgow, who bequeathed to the Senatus Academicus of Glasgow University, free of legacy duty, the sum of £1,000 for providing a Bursary in connection with the Chair of Divinity, to be awarded to a student of Divinity during the last three years of his curriculum ; a sum of £1,000 for providing two Bursaries of equal amount in connection with the Chair of Mathematics, to be awarded to advanced students in Mathematics, the period of tenure to be fixed by the Senate ; and a further sum of £1,000 for providing two Bursaries of equal amount in connection with the Chair of Civil Engineering and Mechanics, to be awarded to advanced students of Engineering and Mechanics, the period of tenure to be fixed by the Senate. Any of the Muir Bursaries in Mathematics and Civil Engineering may be held along with another Bursary.

The following rules and regulations have, in accordance with the provisions of the Deed, been sanctioned by Mr. Muir's trustees, and are to be observed in all time coming :—

1. *Muir Bursary in Divinity*.—Candidates must be entering on their first session in Theology in the University, and the appoint-

<sup>1</sup> Vacant through lapse of time.

ment to the Bursary shall be determined by the result of the annual competitive examination for Bursaries in Theology. The competition shall be open to candidates holding a Degree in Arts in any Scottish University, or who have passed their examinations in four subjects taken out of at least two departments for graduation in Arts. The Bursary shall be tenable for three years, but the second moiety of the third year's Bursary shall not be paid until the Bursar shall have passed the examinations for the Degree of Bachelor of Divinity.

2. *Muir Bursaries in Mathematics.*—Two in number, of which the Junior Bursary shall be tenable for two years, and the Senior Bursary for one year, the former being of half the annual value of the latter. The appointment shall be determined by the proficiency shown by the candidates in the earlier part of their Mathematical course, and the successful candidates shall prosecute the study of the Higher Mathematics during their tenure of the Bursaries. No candidate shall be allowed to hold both Bursaries at the same time. Should the Junior Bursary be resigned by the Bursar at the end of his first year of tenure, the Senate may make an appointment for the remainder of the period.

3. *Muir Bursaries in Civil Engineering and Mechanics.*—Two in number, and of equal value. The appointments shall be determined by the proficiency shown by the candidates in the earlier part of their Engineering course. The period of tenure for each Bursary shall be the session of attendance on the Senior Class of Civil Engineering and Mechanics (Class IV.). Should a vacancy occur by reason of non-attendance of a selected candidate, the Senate may make an appointment for the remainder of the period. No candidate shall be allowed to hold both Bursaries.

4. The Senate reserve the right to withhold the Bursary in any case in which a satisfactory standard has not been attained by any of the competitors.

5. Arrangements for carrying out these rules and regulations shall from time to time be made by the Senate, and notice thereof shall be published in the *University Calendar*.

*Arrangements for Session 1907-8.*—*Muir Bursaries in Mathematics.*—The appointment to the Junior Bursary, tenable during sessions 1908-9, 1909-10, shall be determined by the results of the written examinations passed in the course of the session 1907-8 by the public students of the Ordinary Class of Mathematics. The successful candidate shall, during session 1908-9, attend the Intermediate Honours Class, and during session 1909-10 the Advanced Honours Class of Mathematics. The appointment to the Senior Bursary, tenable during session 1908-9, shall be determined by the results of the written examinations passed in the course of the session 1907-8 by the public students of the Intermediate Honours



Class. The successful candidate shall, during 1908-9, attend the Advanced Honours Mathematical class.

*Muir Bursaries in Civil Engineering and Mechanics.*—Candidates for the Bursaries tenable during session 1908-9 must be (a) students attending during session 1907-8 Engineering Class III. or either class of Electrical Engineering, who are also attending or have in a previous session attended the Junior or the Senior Class of Engineering Drawing and Calculations, or (b) students attending during session 1907-8 the Junior or the Senior Class of Engineering Drawing and Calculations, who have in a previous session attended the Engineering Class II. or Class III. or either class of Electrical Engineering. The appointment shall be made by consideration of merit shown during attendance on, and by examination in the subjects of, those classes. The successful candidates shall, during session 1908-9, attend the Senior Class of Civil Engineering and Mechanics (Class IV.).

*Bursars in Mathematics.*—Junior Bursar for sessions 1907-8, 1908-9, William M. Smart, 1907; Junior Bursar for 1907-8, William L. McKinlay, 1907; Senior Bursar for session 1907-8, Caleb A. Stewart, 1907.

*Bursars in Civil Engineering and Mechanics* for session 1907-8—David Thomson and John M. Strang, 1907.

*Bursar in Theology.*—William K. White, 1906.

WILLIAM MUIR DIVINITY BURSARIES (*Theology*).—Established in 1886 by the Governors of the Glasgow General Educational Endowments Board, under Section 35 of their Scheme. The Bursaries are two in number, each of £25 annual value. Candidates must have passed the examination of the Examining Board for entrance to the Divinity Hall of the University, and must lodge applications with Mr. W. H. Macdonald, Hutchesons' Buildings, Ingram Street, on or before the 11th day of October. The Bursaries are awarded in accordance with the results of the competition for Bursaries in Theology, and are tenable for two years.

*Bursars*—<sup>1</sup>John M. Hunter, M.A., 1905; Thomas L. Douglas, M.A., 1906.

NOTMAN BURSARY (*Theology*).—By deed of Settlement dated 15th August, 1876, Mrs. Margaret Adam Notman or Napier of Hillhead, Glasgow, widow of Mr. William Napier, directed her executors to pay over to the Principal and Professors of the Glasgow College, the sum of £500 sterling for the purpose of founding a Bursary in the College, to be called the Notman Bursary, in memory of her father and brother. The Bursar to be a student of Divinity, who shall appear in public examination to be best qualified and deserving. Present value, £18 per annum.

*Bursar*—James MacMorland, 1906.

<sup>1</sup> Vacant through lapse of time.

**JAMES PATERSON (BAPTIST) BURSARY (*Arts*).**—Founded in 1885 in commemoration of the completion, in 1879, of the fiftieth year of the existence of Adelaide Place Baptist Church, Glasgow, and of the Pastorate thereof of Dr. James Paterson during the same period. The sum subscribed for the purpose, amounting with interest to £619, was assigned and conveyed to the Senate in trust to be applied in all time coming to provide a Bursary in the Faculty of Arts to be called the James Paterson Bursary. The Bursary is tenable for four years, and is open to competition to any student of the first year in Arts who is a member of a Baptist Church, and who is entering upon his studies with a view to the ministry in the Baptist denomination. The Bursar during his tenure of the Bursary must be a member of Adelaide Place Baptist Church or of some other Baptist Church in Glasgow or neighbourhood. The Bursar must graduate in Arts, and before payment of the second moiety of the last year's Bursary must produce evidence that he has taken the degree, or that he has passed all the examinations necessary for graduation. On the Bursary falling vacant otherwise than by lapse of time, the Senate may appoint for the remainder of the term, or for the full period after competition. Before payment of the second moiety in each year the Bursar must produce a certificate of fitness for the ministry from a Committee of Adelaide Place Baptist Church, from the Baptist Union of Scotland, or some recognized Educational Institution of the Baptist Body.

*Bursar*—Thomas W. Armour, 1904.

**JAMES PATERSON BURSARY (*Arts*).**—In 1904 the Trustees of the late Rev. James Paterson, D.D., of Adelaide Place Baptist Church, Glasgow, transferred to the University Court £560 of Caledonian Railway 4 per cent. Consolidated Preference Stock, No. 2, for the foundation of a Bursary in Arts in terms of his Trust Disposition and Settlement. He prescribed not only the subjects but also the books on which the competitors should be examined. The following regulations drawn in accordance with the provisions of the will were adopted by the Senate on 6th April, 1905, and approved by the University Court on 4th May, 1905, viz.:

1. The Bursary shall be in the Faculty of Arts, and shall be open for competition to students of the first or second year.

2. Candidates shall undergo a special examination in Latin (Virgil), Greek (the New Testament), Hebrew (Proverbs), and Logic (Whately's Logic).

3. The Bursary shall be tenable for three years, and the Bursar shall study for a degree in Arts.

4. The second moiety of the third year's burse shall not be paid till the Bursar has taken the degree of M.A.

The Bursary will be open to competition in October, 1907.

**JAMES ALEXANDER PATERSON BURSARIES** (*Arts and Medicine*).—Founded in 1892, under the Trust Disposition and Settlement of James Alexander Paterson (for many years a member of Shamrock Street United Presbyterian Church), who died at Glasgow on 31st January, 1889.

The Bursaries in Arts are tenable for three years. They are open to competition to students entering upon the first or second year of their attendance at the University, who purpose studying for the ministry in connection with the United Free Church, and who intend to qualify for and take, in the University of Glasgow, the degree of M.A. Each candidate before the competition must lodge with the Clerk of Senate, (1) a written declaration of his intention to comply with and observe these conditions, and (2) a certificate from the Convener or one of the Clerks of the College Committee of the United Free Church of Scotland, bearing that the Candidate is recognized by that Church as an accepted student pursuing his studies with a view to the ministry therein. In October, 1907, three Bursaries of £30, £20, and £10 respectively will be offered for competition. The Examination is in Hebrew (*Book of Ruth*) and Greek (*Acts of the Apostles*). The last moiety in the last year is payable after the Bursar has passed all the examinations for the degree of M.A. In the event of the holder of a Bursary graduating at the end of his second year of tenure, he shall retain his Bursary, during the third year of tenure, only on condition that he shall engage in a course of study in the University of Glasgow approved by the *Senatus Academicus* in subjects included in the curriculum for degrees in Arts.

The Bursaries in Medicine are tenable for four years. They are open to competition to students entering upon the first or second year of their medical curriculum at the University of Glasgow, who intend to qualify for and take, in the University of Glasgow, the degree of M.D. Each candidate must before the competition deliver to the Clerk of Senate a written declaration of such intention. The subjects of examination are Mathematics and Natural Philosophy, and the papers will be on the same standard as the papers in Mathematics and Dynamics for the Bursary competition in Arts. Two Bursaries of £25 and £20 respectively will be offered to competition in October, 1907. The last moiety in the last year is payable after the Bursar has passed all the examinations for the degrees of M.B. and Ch.B.

It shall be competent for the holders of these Bursaries, whether in Arts or in Medicine, to hold any other Bursary or Scholarship in this University, if the Regulations of that other Bursary or Scholarship permit.

*Bursars in Arts*—<sup>1</sup>Samuel F. Hunter (£35), 1904; <sup>1</sup>Joseph Gray (£25), 1904; <sup>1</sup>Louis C. Phillips (£20), 1904; Alexander D.

<sup>1</sup> Vacant through lapse of time.

Muir (£35), 1905 ; Duncan W. Semple (£25), 1905 ; Stewart R. Scott (£20), 1905.

*Bursars in Medicine*—<sup>1</sup>Robert M. Morison (£35), 1903 ; <sup>1</sup>Frank N. Marsh (£25), 1903 ; Adam Patrick, M.A. (£35), 1904 ; William M'Adam, M.A. (£25), 1904 ; James Dunlop (£35), 1905 ; James B. Galbraith (£25), 1905 ; John Gibson (£25), 1906 ; James Harper, M.A. (£20), 1906.

**PATRICK BURSARIES (Arts).**—These Bursaries were founded in 1860 by Mr. William Patrick of Roughwood, W.S., and were originally two in number, the one consisting of the free annual proceeds of a sum of £2,000 of consolidated stock of the Glasgow and South-Western Railway, the other of the free annual proceeds of £1,000 of the same stock. They were tenable for two years, but might be continued for other two. By Ordinance No. 85 of the Universities Commission (1889) the number of Bursaries was increased to three, all equal in value, and tenable for four years. The present annual value of each is £32. If a Bursar graduate at the end of three years he shall only retain his Bursary during the fourth year of tenure if he shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. In other respects also the provisions of Ordinance No. 57 apply to the Patrick Bursaries. Candidates must have gone through a course of education at some one of the Public Schools in the County of Renfrew, where a regular course of Classical Study is pursued ; and must be in circumstances to render it desirable that they should have assistance in prosecuting their studies at the University. The Rector or Head Teacher of such Public School to grant a certificate to any number, not exceeding four of his best scholars, who shall be entitled to present themselves to the Principal and Professors as candidates for the Bursaries. Certificate forms may be obtained from the Assistant Clerk (Matriculation Office).

*Bursars*—<sup>1</sup>Thomas N. McIlravey, 1903 ; Edward S. Russell, 1904 ; Adam Scott, 1905.

**PENDER MEMORIAL BURSARY.**—Founded in 1898 by a Committee of which the Marquis of Tweeddale was Chairman to commemorate the leading part taken by the late Sir John Pender, G.C.M.G., in the establishment and development of Submarine Telegraphy and in its extension throughout the world. The fund consists of about £1,650, and the annual value is about £52. The following regulations were made by the Senate after communication with the Glasgow and West of Scotland Technical College and the Committee :—1. That the holding of a Diploma in Electrical Engineering of the Glasgow and West of Scotland

<sup>1</sup> Vacant through lapse of time.

Technical College be a condition of appointment to the Bursary. 2. That the appointment to the Bursary be made by the authorities of the Glasgow and West of Scotland Technical College. 3. That the Bursary be tenable for one year. 4. That the Bursar be required during his tenure to attend in the University three full courses or their equivalent from among those that would constitute in his case a qualifying curriculum of study for the Degree of B.Sc. in Engineering. 5. That, in the event of there being no candidate deemed worthy of appointment in any year, the interest be held over to provide a second Bursary in a subsequent year.

*Bursar*—John A. Thomson, 1906.

GLASGOW PERTSHIRE SOCIETY'S BURSARY (*Arts*).—Founded by the Glasgow Perthshire Society in 1873. Value, £25, and tenable for three years. Open to competition to natives and sons of natives of the county of Perth, and also to sons of persons who are *bonâ fide* residents in that county, and have resided in it for not less than three years at the time of the competition. Candidates must be entering on their first year of attendance as students in the University of Glasgow, and the holder of the Bursary will be required to complete attendance on at least two of the classes in the curriculum of Arts in each session. When a vacancy occurs names of candidates should be sent to Mr. George Gray, Jun., 156 St. Vincent Street, Glasgow, Secretary of the Society, not later than the twenty-fifth day of August preceding the competition.

*Bursar*—William M. Smart, 1906.

POLLOCK BURSARIES (*Arts*).—Founded in 1878, in terms of the Trust Disposition and Settlement of the Rev. Alex. Pollock, senior minister of the Free South Church, Paisley, who bequeathed £3,000, free of legacy duty, for that purpose. The Bursaries are at present each of the annual value of £37, and are designed to assist young men entering the University of Glasgow, whose circumstances are such as to render it desirable that they should have assistance in prosecuting their studies. The patrons are the Principal and Professors in the Faculty of Arts. Each candidate must lodge along with his application a letter from the Rector, Headmaster, or Classical Teacher of one of the Public Schools or Public Academies within the parliamentary boundaries of the burgh of Paisley, where a regular course of Classical study is pursued, certifying that he has completed his course of education at such school or academy. Certificate forms may be obtained from the Assistant Clerk (Matriculation Office). Should no such qualified candidates present themselves, or should the otherwise qualified candidates fail to reach a satisfactory standard in the Bursary Examination, the Bursary or Bursaries vacant for the time being shall

be open to all the candidates in the ordinary Bursary Competition. The Bursaries are three in number, and are tenable for three years, during which period the Bursars must be students in the Faculty of Arts. The second moiety of the third year's Bursar shall not be paid until the Bursar shall have passed the examinations in four subjects taken out of at least two departments for graduation in Arts.

*Bursars*.—<sup>1</sup>John G. Ritchie, 1904; George C. Hutton, 1905; James Baillie, 1906.

T. and V. PRATT BURSARIES (*Any Faculty*).—The late Mr. Thomas Pratt, who resided at Castleyett, near Lanark, by his Trust Disposition and Settlement, dated 22nd December, 1877, directed his Trustees, as soon after his death as convenient for them, to set apart and invest in name of themselves and such other Trustees as they might deem suitable, a sum to yield an annual income of £40, for the purpose of establishing two Bursaries of £20 each, to be called the T. and V. Pratt Bursaries, to assist in maintaining and educating two students in the University of Glasgow or Edinburgh. The necessary funds have now been set aside and invested in name of Trustees for this purpose. The Bursaries are open to sons and daughters of working men residing in or belonging to the United Parishes of Wiston and Robertson, and the Parish of Lamington. His Majesty's Inspector of Schools for the district is to name the candidates found after examination to be best qualified and most deserving of the Bursaries, and the examination which, with the concurrence of the Trustees, he at present prescribes is the General Bursary Competition Examination in Arts at Glasgow University. The Bursaries are tenable for four years, or such shorter time as the Bursar may remain at the University, unless the Trustees are dissatisfied with the Bursar's conduct or diligence. When a vacancy occurs, applications should be lodged with the Trustees' Agents, Messrs. Fyfe, MacLean & Co., Writers, 115 St. Vincent Street, on or before 1st September. (Two Bursaries vacant.)

RAINY BURSARIES (*Medicine*).—In 1872, Dr. Harry Rainy, Emeritus Professor of Medical Jurisprudence in this University, made over to the Senate the sum of £1,000 for the institution of two Bursaries in the Faculty of Medicine, and a further sum of £500 to be invested as a supplementary or augmentation fund. The interest of the Bursary Fund is to be divided annually between the two Bursars; and the interest of the supplementary fund is to be employed towards defraying the expenses of administration, and bringing up, when necessary, the annual salaries of the Bursars to £20 each, and increasing the supplementary fund. Should this

<sup>1</sup> Vacant through lapse of time

fund accumulate to £1,000, one half of it is then to be added to the Bursary fund, the interest of which shall be divided as before between the two Bursars. If by this process of augmentation, which is to be repeated as often as the supplementary fund amounts to £1,000, the Bursary fund shall at length yield £60 per annum to each Bursar, the Senate may continue the same process, or constitute additional Bursaries on the principle explained above, the original Bursaries remaining of the value to which they have been raised by augmentation. The augmentation fund is not at any time to be reduced below £500.

The successful candidate may hold his Bursary for two years, namely, during his fourth and fifth years of study in the University of Glasgow. A vacancy occasioned by death, irregular attendance, or misconduct, is not to be filled up till the usual term at which the competition for that Bursary would have fallen due, and accumulations from this source are to be added to the supplementary fund.

A Rainy Bursary will be awarded in November, 1907, to the qualified candidate who, not being the holder of a bursary of equal or greater value, shall be found to have passed in the year 1907 in Anatomy and Physiology of the second Professional examination, and whose aggregate of marks in these subjects and in Chemistry, Botany and Zoology of the first Professional examination, is the highest.

*Bursars*—<sup>1</sup>Matthew J. Stewart, 1905; John Cruickshank, 1906.

**RAMSAY WALKER BURSARIES** (*Arts*).—Two in number, founded in 1879, under the Trust Disposition and Settlement of Miss Ramsay Walker, Crosshill, who bequeathed £700, reduced by legacy duty to £630, for educating two students with a view to the ministry of the Established Church of Scotland. Preference to kindred of the founder, whom failing, to students of the name of Walker, whom failing, to natives of Glasgow, whom failing, the Bursaries will be thrown open to public competition. Candidates must be qualified by their previous education for entering the University. Tenable for four years.

*Bursars*—Robert P. Fairlie, 1905; Archibald U. Millar, 1905.

**R. W. ROBERTSON BURSARY** (*Law*).—See p. 268.

**ROSS BURSARY**.—(See Hyndford and Ross, p. 349.)

**JOHN ROSS, JUNIOR, BURSARY** (*Theology*).—Founded in 1880 by Mrs. Ross, widow of Mr. John Ross, junior, merchant in Glasgow, in memory of her husband. Patrons—The Senate of the University. The Bursary Fund consists of the capital sum of £1,000, set aside by Mrs. Ross for that purpose, and the present annual value is £32. The Bursary is tenable for three years by a student of Divinity in the regular course of study for the degree

<sup>1</sup> Vacant through lapse of time.

of Bachelor of Divinity with a view of becoming a clergyman of the Established Church of Scotland. Candidates must be entering on the first session of their study in Theology in the University, and the award shall be determined by the result of the annual competitive examination for Bursaries in Theology. In cases of equality in the competition there is a preference to the student who may be thought to stand most in need of help to carry on his theological studies, or to one who is a native of Ayrshire. The second moiety of the third year's Burse shall not be paid to any Bursar unless and until he shall have passed all the examinations required for the degree of B.D. In the case of a vacancy occurring otherwise than by lapse of time, the Senate may appoint, with or without examination, a student of the same standing as the previous Bursar.

*Bursar*—Andrew C. Baird, M.A., B.Sc., 1905.

SANDERS BURSARY.—(See Boyd and Sanders Bursary, p. 325.)

(SIR WALTER) SCOTT BURSARIES (*Arts*).—The centenary of the birth of Sir Walter Scott was celebrated in Glasgow in 1871, and in conformity with a suggestion made by Lord Stanley (Earl of Derby), then Lord Rector of the University, the committee who had charge of the arrangements resolved to raise by public subscription a fund for the benefit of distinguished students, and to associate it with Scott's name. The amount subscribed was £3,500, and accordingly two Bursaries, along with the Scott Scholarship, were founded in 1874. The fund is administered by trustees, two of whom are elected by the Senatus, two by the Merchants' House, one by the Faculty of Physicians and Surgeons, one by the Faculty of Procurators, and one being an Assessor of the Council in the University Court, appointed by the four Assessors or a majority of them, in accordance with the provisions of Ordinance No. 91 of the Universities Commission (1889). The Bursaries are now three in number, each of the annual value of £25, and tenable for four years. They are open to free competition, under the same regulations as the competition Bursaries in the University. (One vacancy.)

*Bursars*—Hugh F. Martin, 1904 ; Margaret E. Taylor, 1905.

SHEARER BURSARIES (*Any Faculty*).—Founded in the year 1887, by Archibald Shearer of Boag, who resided in Beith. By Deed of Mortification executed by Mr. Shearer dated 29th April, 1887, he conveyed his lands of Boag, in the parish of Killbirnie, to trustees for the foundation and endowment of three Bursaries for the advancement of the higher education of the young men of his native parish of Dalry, in the county of Ayr. The Deed provides that the Bursaries shall be open to applicants between the ages of fourteen and twenty-four, who are the sons of parents or of a



surviving parent *bona fide* resident for a period of not less than two years immediately preceding the date of application in the parish of Dalry, or to applicants who, for a period of not less than the last two years of their school curriculum, have received their education in the schools within the said parish, to enable the Bursars to pursue their education as students at the University in one or other of the Faculties. Students who have enjoyed a Bursary during their Arts course are eligible for a second Bursary in another Faculty. Applicants to undergo such examination as the trustees may from time to time appoint. Each Bursary to be one-third of free income from the lands of Boag, but not exceeding the annual sum of £30, and to be tenable for three years. Further information will be afforded by the Agents of the Trustees, Messrs. J. & J. McCosh, writers, Dalry. (No vacancy.)

*Bursar*—Alexander Archibald, 1906.

SHIPWRIGHTS' COMPANY BURSARY.—The Fishmongers Company of London has placed the sum of £50 per annum at the disposal of the Educational Trust Fund Committee of the Shipwrights' Company for a period of three years that a Scholarship or Bursary may be given to a deserving student of Naval Architecture in this University. Appointment to the Bursary rests with the Educational Trust Fund Committee, and when a vacancy occurs the Senate is invited to nominate a promising and deserving student.

*Bursar*—David L. C. Evans, 1906.

SIMSON BURSARY (*Arts or Divinity*).—This bursary, of the annual value of about £18, was founded in 1869 by James Simson. The bursar must be a native of Dunbar, and must be attending any Scottish University in the prospect of becoming a minister of the Church of Scotland or of going abroad as a missionary. It is tenable for one or more years, not exceeding three. Candidates must apply to the Session Clerk, Dunbar Parish Church.

SMITH (CRUTHERLAND) BURSARY (*Any Faculty*).—In 1849 Dr. John Smith of Crutherland founded two bursaries, which were not restricted to any particular Faculty. Patrons—the Directors of the Incorporated Company of Stationers. Sons of members of the Company are preferred, then sons of persons connected with any of the trades included in their charter, whom failing, such other students as may be approved of by the patrons. The value of each was £9 per annum, and they were tenable for one or more years at the option of the patrons. Ordinance No. 77, issued on 15th February, 1895, provides that the two bursaries shall hereafter be conjoined into one, and that the bursary shall be tenable for four years. If a bursar in Arts graduate at the end of three years, he shall only retain his bursary during the fourth year of tenure if he

shall engage in a course of study approved by the Senate in subjects included in the curriculum for Degrees in Arts or in Pure Science. If a bursar in Divinity graduate at the end of three years he shall only retain his bursary during the fourth year of tenure if he shall engage in a course of study in Divinity approved by the Senate. Applications to be made to Mr. R. Brodie, 77 St. Vincent Street, Glasgow.

*Bursar*—Andrew Cunningham (three years), 1905.

STEVENSON OF DALRY BURSARIES (*Arts*).—The Rev. Robert Stevenson, D.D., minister of the Parish of Dalry, Ayrshire, who died on 11th September, 1890, by his Trust Disposition and Settlement dated 28th July, 1890, directed his Trustees to pay over to the University Court the sum of £2,000, free of legacy duty, for the foundation of two Bursaries in Arts. They are open for competition to students entering on the first or second session of attendance in the Faculty of Arts, who are prosecuting their studies with a view to the ministry of the Church of Scotland, with a preference in the first place to natives of the parish of Dalry in Ayrshire, and in the second place to natives of the parishes of Bannockburn or St. Ninians in Stirlingshire. The Bursaries, which are each of the annual value of £33, are tenable for four years.

*Bursars*—Andrew Currie, 1904; George D. Henderson, 1905.

ANDREW AND BETHIA STEWART BURSARIES (*Arts and Law or Medicine*).—Miss Bethia Stewart, of Moss-side Park, Crossmyloof, who died on 10th April, 1902, directed her Trustees to give effect to the wishes of her brother Andrew Stewart, who predeceased her, by applying the income of the residue of her estate to the payment of bursaries for students in the University of Glasgow.

The Bursaries in Arts are each of the annual value of £20, and are tenable for four years. Candidates must have qualified for the Arts Course either by gaining a Group Leaving Certificate of the Scotch Education Department or by passing the University Preliminary Examination in Arts, and must undergo a written examination, comprising an English Essay, and papers in *either* French *or* German *or* Italian, and also an oral examination in the foreign language selected by the candidate for the written competition.

The Bursaries in Law or Medicine are each of the annual value of £50, and are tenable for three years. Candidates must be Masters of Arts of the University of Glasgow, and must undergo a written examination, comprising an English Essay, and papers in not more than two of the following subjects, viz., Latin, Greek, French, German, Mathematics, and also an oral examination in the subjects selected by the candidate for the written competition.

Four Bursaries in Arts, and one in either Law or Medicine, will be open for competition in October, 1907. The names of

candidates should be entered not later than 1st September, 1907, with Messrs. John Steuart and Gillies, Writers, 204 West George Street, Glasgow, from whom further information and Forms of Application may be obtained.

*Bursars in Arts*—Mary C. Waddell (1905), 1904 : Alice M. Nelson, 1904 ; Mary Hunter, 1904 ; Ada M. W. Renwick, 1904 ; Mary P. Houstoun, 1904 ; Margaret Buchanan, 1905 ; Catherine Craig, 1905 ; Isabella Davidson, 1905 ; Ruby Jex Long, 1905 ; Charlotte W. Small, 1905 ; Isabel Robertson, 1906 ; Nettie Gallie, 1906 ; Margaret W. Waddell, 1906.

*Bursar in Law*—Thomas D. K. Murray, M.A., 1905.

*Bursar in Medicine*—James Dunlop, M.A., 1905.

STEWART BURSARIES (*Arts*).—These Bursaries, three in number, founded in 1809 by the Rev. James Stewart, are in the gift of the Senate. They commence with the Humanity or the Greek Class, and may be held during the Gown Course. Value, £15 per annum each. The names Stewart and Simpson were preferred, but this preference was cancelled by Ordinance No. 57 of the Universities Commission (1889). In case of a vacancy, a student of the same standing is appointed. The Senate, acting under Section XIII. of the said Ordinance, have resolved to award one of the Stewart Bursaries in respect of exceptional distinction in English, to a student of the first year who, having passed the Arts Preliminary, has gained the highest marks in English in the Bursary Examination and has not obtained a bursary for general excellence.

*Bursars*—<sup>1</sup>George Bell (English), 1903 ; William B. Henderson, 1904 ; Margaret S. McLeod, 1904.

STILLIE BURSARY IN MUSIC.—This Bursary was founded by Mrs. Thomas Stillie in 1885, the Trustees being the Executive Council of Queen Margaret College, and their successors in office. The Trustees were to apply the annual proceeds of the investment of £125 in providing one Bursary, to be granted yearly to a student of Music, as a reward for proficiency in Music, and an encouragement to further study. The Trustees were empowered to make such regulations as they should see fit from time to time for testing the merits of the candidates, and also for prescribing the age of candidates and the course of study to be pursued in connection with Queen Margaret College or otherwise, which the Trustees might desiderate as a condition of awarding the Bursary. The University Court, having taken over Queen Margaret College, are the successors in office of the Executive Council of Queen Margaret College in respect of the Stillie Bursary Fund, which in January, 1895, amounted to £160.

<sup>1</sup> Vacant through lapse of time.

The following regulations have been adopted by the Court:—

1. The Bursary shall be awarded in connection with the examinations in Music conducted in Glasgow by the Associated Board of the Royal Academy of Music and the Royal College of Music.
2. The Bursary shall be awarded by the Senate on a report by the Examiners of the said Board.
3. Only candidates for the Senior Grade Examination shall be eligible, and the Bursary shall be awarded to the candidate examined in Glasgow who shall obtain the highest number of marks in that examination.
4. The Bursary shall not be awarded if the candidate with the highest number of marks has not obtained honours; and in that case the proceeds shall be added to the capital fund.

*Bursars*—John Younger, 1906; Ethel Gallacher, 1907.

DR. STRANG BURSARIES (*Science*).—MRS. Machen of FernieCraig, Skelmorlie, who died on 15th October, 1894, left funds for the foundation of four Bursaries, each of the annual value of £20, to be instituted in connection with the University of Glasgow, in memory of her brother, the late Dr. John Strang, City Chamberlain of Glasgow from 1834 to 1863. The Trustees under their powers have meanwhile agreed that these Bursaries should be tenable by students of Engineering Science in the University of Glasgow. Each Bursary is tenable for three years. The Bursaries shall be awarded on the results of the Science Preliminary Examination, and no candidate shall be appointed to a Bursary unless he passes the whole preliminary examination. Each Bursar shall be required to attend a course qualifying him for graduation in Engineering Science on the side of Engineering.

The Bursaries shall be payable by equal moieties in the month of January and at the close of the winter session, but the second moiety of the second year's Bursary shall not be paid until the student has passed the first Science Examination for B.Sc. in Engineering Science, except in special circumstances. A student holding another Bursary may, in the discretion of the Trustees, be also appointed to a Strang Bursary.

In each of the years in which two appointments fall to be made, the Trustees, in appointing to the second Bursary, will take into account, not only the results of the examination, but also, and specially, other circumstances (financial and otherwise) affecting the candidates.

Further particulars may be obtained from Professor Barr, D.Sc., Engineering Department, University of Glasgow, or from Messrs. Kerr & Barrie, Solicitors, 149 St. Vincent Street. (One vacancy.)

*Bursars*—Alexander Gordon, 1904; Thomas Buchanan, 1904; Keningale B. Wright, 1904; John M. Strang, 1905; George Barretr, 1905; Robert Boyle (one year), 1906; Walter J. T. White, 1906; Robert Stewart, 1906.

STRUTHERS BURSARY.—(See Gilhagie and Struthers Bursary, p. 342.)

TAYLOR BURSARIES (*Any Faculty*).—Two in number, founded by Mr. James Taylor, writer in Glasgow, who by Trust Disposition and Settlement of date 30th June, 1857, bequeathed to the University the sum of £800 for Bursaries. After Mr. Taylor's death, the trustees found that the estate was not sufficient to pay the various legacies in full. They paid over to the University in January, 1868, the sum of £560, and in September, 1878, a further and final dividend of £80, making in all £640, the free proceeds of which are applied to the payment of the two Bursars. The Senate are Patrons. The preference given to the names Tayler or Taylor, Ronald, Dunlop, Henderson, and M'Arthur, was cancelled by Ordinance No. 57 of the Universities Commission (1889).

*Bursars*—George Taylor, 1905 ; Annie I. Henderson, 1906.

JAMES THOMSON PHILOSOPHICAL ENTRANCE BURSARY (*Arts, Phil.*).—Founded by subscription in 1878 in memory of James Thomson, M.A., a distinguished student of this University, who died in 1876 before the close of his theological curriculum. The Bursary consists of the proceeds of a sum of about £300, and is tenable for two years. It is awarded biennially for the best examination in (a) Mental Philosophy and (b) English Literature alternately. The examination is open to all students of the first and second year who have not already attended the Logic, Moral Philosophy, or English Literature Class, and who have not attended a session in any other Scottish University. The Bursary is payable in four instalments, but the last instalment will not be paid till the Bursar has passed his examinations in Latin and Greek for the M.A. Degree in Glasgow University. The subjects of Examination in Mental Philosophy and English Literature respectively are the same as for the John Ferguson Jaffrey Bursary. (See page 350.)

The next examination will be held in October, 1908, the subject of examination being Mental Philosophy.

*Bursar*—Archibald U. Millar, 1906.

WALKINSHAW YOUNG BURSARY (*Law*).—Founded in 1878 by Major Young, Dunmore, Kirn, who bequeathed to the University a sum of £500, free of legacy duty, for promoting any useful branch of Education which the Principal and Professors may think proper.

The following regulations have been adopted :—

1. The Bursary shall be tenable for two years, during which the holder shall give regular attendance as a public student in the Faculty of Law in the University, to the satisfaction of the Senate.

2. All persons who within two years previous to the time when an appointment to the Bursary is made, have, at an examination in

Arts, for the Degree of B.L. passed in not fewer than two Arts subjects, or have passed in any two subjects for the Degree of M.A., shall be eligible as candidates, and the Senate shall appoint that one among the candidates who in their opinion is the most distinguished. A student who passes a qualifying Examination in the October of the session in which an appointment is made, shall be held eligible within this rule, but one who has passed an examination in the October two years preceding such an appointment, and has not passed any subsequent qualifying examination, shall not be eligible.

3. The Bursary shall not be tenable along with any other Bursary or Scholarship in the University.

The next appointment to this Bursary will be made in December, 1908. Applications, containing in each case a statement of any distinctions gained by the candidate, to be sent in to the Clerk of Senate on or before 1st December, 1908.

*Bursar*—James Keith, 1906.

WALTON BURSARY (*Medicine*).—This Bursary was founded in 1763 by Dr. William Walton, Huntingdon, for a student in Medicine. The Earl of Sandwich has the right of appointing to the Bursary one of two students nominated by the Senate. Preference is given to "Students of the English Nation." The Bursary may be held for four years. Value about £34 per annum.

*Bursar*—Morris W. Broudy, 1905.

ANDREW WEIR BURSARY (*Medicine*).—Founded in 1884, in terms of a Bequest by Mrs. Janet Maxwell or Weir, relict of Andrew Weir, feuar in Paisley. Mrs. Weir bequeathed the sum of £500 to the University, and directed the annual income (about £16) to be devoted to maintaining a Bursary in connection with the Medical School, in such a manner as the Senate may appoint. The Bursary is in memory of a son of the founder, Andrew Weir, a medical student of Glasgow University, who held subsequently the post of Resident Physician in the Paisley Infirmary, and in the discharge of his duties there contracted a fever, of which he died. The Bursary is awarded annually at the beginning of the Winter Session, in accordance with the results of the second and third professional examinations, account being taken of the marks gained by all students who have passed both of these examinations within a period not exceeding thirteen months, reckoning backward from the date of the professional examinations in October of each year. During the tenure of this Bursary, which may be held along with another Bursary, the holder shall be bound to give regular attendance on the classes of the medical curriculum in the University.

*Bursar*—David A. Thomson, M.A., 1906.

**WILLIAM WHYTE BURSARIES** (*Arts, Law, or Medicine*).—Four in number, founded in 1893 in memory of Mr. William Whyte, at one time Preceptor of Hutchesons' Hospital, in accordance with instructions contained in the Trust Disposition and Settlement of his daughter, Mrs. Isabella Whyte or Bamber, who died in 1882. The Trustees executed a Deed of Mortification transferring £2,000, less legacy duty, to Hutchesons' Hospital. The Bursaries are each of the annual value of £25, and are tenable for four sessions in the Faculties of Arts, Law, or Medicine. They are open to competition by boys who have attended and completed the curriculum in the Secondary Department of Hutchesons' Grammar School. Candidates must give in their names to Messrs. Hill & Hoggan on or before 1st September in each year, to be sent to the Clerk of Senate, that they may be entered for the University Entrance Bursary Competition. One Bursary will be awarded every year to the candidate highest in the order of merit who shall not have gained and elected to hold a Bursary of equal or higher value at the general competition, provided his attainments have reached a standard satisfactory to the Patrons of Hutchesons' Hospital.

The sum of £408 15s. 8d. at the credit of the Fund at 31st December, 1892, is to be allowed to accumulate until that sum, with such additions as may accrue from any portion of the income that may not be required for the purposes aforesaid, shall amount to a sum which will produce a return of £20 yearly. There shall then be instituted a Bursary of that value, to be competed for by girls educated in Hutchesons' Girls' School, which Bursary shall be tenable at the University of Glasgow.

*Bursars*—<sup>1</sup>Walter S. L. Dalgleish, 1903; William M. Mathieson, 1904; James D. Walker, 1905; Peter A. C. Milne, 1906.

**KING WILLIAM'S BURSARIES** (*Two in Arts and Two in Theology*).—These Bursaries, founded by his Majesty King William III. in 1695, were formerly six in number and known as the Exchequer Bursaries. They were tenable for six years—the first in Logic, the second in Moral Philosophy, the third in Natural Philosophy, and the last three in Divinity. The bursars in Philosophy received £10 per annum each, and those in Divinity £13 6s. 8d. The Foundation was regulated by Act of Parliament, 1758. By Ordinance No. 99 the Universities Commission (1889) altered the conditions and directions affecting the Foundation, making two Bursaries in the Faculty of Arts, each of the annual value of £15, and two in the Faculty of Divinity each of the annual value of £20. Each of the Bursaries is tenable for three years, and no longer. The Bursaries in Arts are open by competition to all students entering on their first year of attendance on a course of study for graduation in Arts

<sup>1</sup> Vacant through lapse of time.

The Bursaries in Divinity are open by competition to all students who are Masters of Arts, or who have passed all the examinations necessary for graduation in Arts, and who are entering on their first year of attendance on a course of study for graduation in Divinity. In other respects the provisions of Ordinance No. 57 apply to the Bursaries on this foundation. The Bursaries in Divinity are both vacant.

*Bursars in Arts*—Andrew D. Gibb, 1906; Jeannie Sutherland, 1906.

*Bursars in Divinity*—<sup>1</sup>James F. McCreath, M.A., 1904; <sup>1</sup>John A. Swan, M.A., 1904.

WILLIAMS BURSARIES (*Arts and Theology*).—The Rev. Dr. Daniel Williams, London, who died in 1716, founded bursaries tenable at the University of Glasgow by youths of South Britain, who shall be designed for the Ministry. The appointment rests with Dr. Williams's Trustees, and is made, subject to certain conditions, upon the result of a competitive examination held in London in July. Application for admission to the Examination must be made before the first day of June. Every candidate must satisfy the Trustees that he intends to enter the Protestant Dissenting Ministry. The Bursaries, £40 each per annum, are tenable for three years, but may, in the discretion of the Trustees, be renewed for a fourth year, either to enable the student to take Honours, or to enable him, after graduating, to enter the Divinity Hall. If the Bursary be continued after graduation and held in the Divinity Hall, the amount is raised to £45. Bursars must enter as public students of the University, and must therefore satisfy the requirements as to the Preliminary Examination in Arts, either before the examination in London, or in the next following Preliminary Examination. Prospectus of the Examination and other information may be obtained from the Secretary of the Trust—Francis H. Jones, B.A., Dr. Williams's Library, Gordon Square, London, W.C. (Two appointments in 1907, and one in 1908.)

*Bursars*—<sup>1</sup>Joseph D. M. Rorke, 1904; <sup>1</sup>Sydney R. Ward, 1904; <sup>1</sup>Charles H. Weaver, 1904; Wilfrid L. Marsh, 1905; John M. Gardner, 1906; John W. Saunders, 1906.

WILSONE BURSARY.—(See Boyd and Wilson, p. 325.)

GEORGE YOUNG BURSARY (*Science*).—By Trust Disposition and Settlement of date 30th August, 1892, Mrs. Catherine McFarlane or Young, who died at Helensburgh on 4th November, 1893, directed her Trustees to make over to the Senate of the University of

<sup>1</sup> Vacant through lapse of time.



Glasgow the sum of £1,000, free of legacy duty, for the purpose of founding, in memory of her husband and son, a Bursary in connection with the class of Civil Engineering, on such terms and conditions as the Senate should from time to time fix. The Senate have determined that the Bursary shall, upon the recommendation of the Faculty of Science, be awarded to the candidate who has the best record in his First Science Examination. Students who have passed the whole of that examination or at least in Mathematics and Natural Philosophy with or without the higher branches specified in Ordinance No. 23, Section ix., Subsections 1 and 2, may offer themselves as candidates, but students who have completed the qualifying attendance in Engineering shall not be eligible. The Bursary shall be tenable for one year, during which the Bursar must attend a course of Laboratory Practice in Engineering and either a course (or half course) of Engineering Lectures or a course of Engineering Drawing. Appointment in the month of October.

*Bursar*—Walter Brown, 1906.

MAJOR YOUNG'S FUND BURSARIES (*Law*).—Two in number, founded in 1890 by the Trustees of the late Major Young, founder of the Walkinshaw Young Bursary. The amount of the Bursary Fund is about £1,312, and each of the Bursars receives one half of the free annual income thereof. In accordance with Major Young's desire, the Bursaries are open only to applicants whose pecuniary circumstances are such as in the judgment of the Senate render it desirable that they should have assistance in prosecuting their studies at the University, preference being given, *ceteris paribus*, to natives of Argyllshire or Renfrewshire. One of the Bursaries is tenable for six years, and is awarded by competitive examination to a student of the first year who intends to study for a Degree in Law. The Bursar is required during his tenure of the Bursary to attend such classes and to pass such examinations for a Degree in Law as shall be held by the Senate to correspond to the successive stages of his course and he must attend a class or classes in the Faculty of Law during at least the last two years of his tenure of the Bursary. The other Bursary is tenable for two years, and is awarded by competitive examination upon subjects prescribed by the Senate. Candidates must have expressed their intention of attending the classes of Scots Law and Conveyancing, and the Bursar must attend these classes in separate sessions during his tenure of the Bursary. Either of these Bursaries may be held with any other Bursary, Scholarship, or Prize in the University, but both shall not be held together by one Bursar. The subjects of examination are those prescribed for the General Bursary competition. (One vacant.)

*Bursar*—Robert Gibson, 1904.

## 2. EXHIBITIONS, FELLOWSHIPS, AND SCHOLARSHIPS.

## ALPHABETICALLY ARRANGED.

*N.B.*—In cases in which a Scholarship or Fellowship falls vacant otherwise than by lapse of time, the Senate may, except where it is inconsistent with the deed of foundation, hold a competition, and make an appointment for the remainder of the period for which such Fellowship or Scholarship may be held. At the next ordinary competition no student shall be excluded from the competition by reason of his having previously been appointed to fill a vacancy for less than the full period; but in no case shall any student hold such Scholarship or Fellowship for longer than the full period fixed in the regulations applicable to such foundation.

FOUNDATION.	No. of Scholarships, &c.	TENABLE BY	Approximate Annual Value of each.
Black Theological, -	1	Masters of Arts of Scot. Univ.,	£140
Breadalbane, - -	2	M.A. or B.Sc., Eng., Glas. Univ.,	£55
Clark, George A., -	4	3 M.A., 1 M.A. or B.Sc., do.	£168
Clark, John (Mile-end),	12	Arts Students at close of Curric.,	£50
Coats Memorial, -	1	Medical Graduates of Glas. Univ.,	£80
Donaldson, Alexander,	1	Candidates for B.Sc. (Chemistry),	£42
Donaldson, Robert, -	2	Bachelors of Science of Gl. Univ.,	£64
Eglinton, - - - -	2	Masters of Arts of do.	£65
Euing, William, - -	3	Do. do.	£100
1851 Exhibition Science	2	Science Students, - - -	£150
Ferguson, - - - -	6	Masters of Arts of Scot. Univ.,	£80
Foulis Memorial, - -	1	Medical Graduates or Licentiates,	£50
Grocers Company, -	2	Research Stud. in Public Health,	£300
Houldsworth, - - -	1	Research Students in Nat. Phil.,	£150
Lloyd's Register, - -	3	Students of Naval Architecture,	£50
Luke, - - - - -	1	Masters of Arts of Glas. Univ.,	£95
Mackay Smith, - - -	2	Students in Nat. Phil. and Chem.,	£48
Mackinnon, - - - -	1	(See page 000).	£56
Metcalfe, - - - - -	1	Masters of Arts of Glas. Univ.,	£100
Mining, - - - - -	2	Graduates in Science, - -	£50
Reid-Stewart, - - -	1	Masters of Arts of Glas. Univ.,	£56
Sandford, - - - - -	1	Greek Students, do.	£20
Scott (Sir Walter), -	1	Masters of Arts of do.	£80
Shaw Philosophical, -	1	Do. Scot. Univ.,	£140
Snell (at Oxford), - -	5	Masters of Arts, etc., Glas. Univ.,	£80
Thomson Experimental	3	Students of Natural Philosophy,	£20
Watt, James, - - - -	1	Bachelors of Science, - - -	£38

**BLACK THEOLOGICAL FELLOWSHIP.**—This fellowship, which is now of the annual value of £140, was instituted under the Will of the late Mrs. Janet Black (who died in 1876) in memory of her husband, the Rev. William Black, D.D., minister of the Barony Parish of Glasgow. Candidates must be members of the Established Church of Scotland.

The following regulations have been adopted by the Senate with the sanction of the University Court:—

1. The Black Theological Fellowship shall be tenable for two years.

2. It shall be awarded by competition open to Masters of Arts from any of the Universities of Scotland who shall complete the ordinary curriculum of Theological study in the University of Glasgow in the academical year in which the examination is held, or who shall have completed that curriculum in any of the three preceding years.

3. At the competition in April, 1908, and thereafter in April at intervals of four years, the examination shall be in Divinity (Biblical and Systematic Theology), Church History, and Biblical Criticism; and at the competition in November, 1910, and thereafter in November at intervals of four years, the examination shall be in Hebrew (with one cognate language), New Testament Exegesis, and Apologetics.

4. The Fellowship shall be awarded by the Theological Faculty only when the Examiners shall report that the Candidate has attained a sufficient standard of merit.

5. The holder of the Fellowship shall, during the tenure of it, perform such duties—whether in the form of giving a short course of lectures, or of undertaking tutorial work, or otherwise—within the University, as may be assigned to him by the Faculty of Theology with the sanction of the Senate.

6. No Candidate who has gained the Fellowship at one examination shall be at liberty to compete for it a second time.

7. The Fellowship shall not be held in conjunction with any other Theological Fellowship or Scholarship or Prize falling to be awarded at the same time, or subsequently during its tenure.

Subject to these regulations an appointment to the Fellowship will be made in April, 1908. In addition to the subjects prescribed for the second department of the examination for the Degree of B.D., the examination will extend to the following:—

*Divinity*: Biblical Theology—The Epistle to the Romans. *Church History*: John Wesley—His life and times.

*Biblical Criticism*: Introduction to, and Exegesis of, the Epistle to the Romans.

*Present Fellow*—James C. M. Fairlie, B.D., 1907.

**BREADALBANE SCHOLARSHIPS.**—The second Marquis of Breadalbane, an alumnus, and afterwards Rector of the University, gave from the first year of his Rectorship (1840-41), and during his lifetime, the sum of £100 annually, which was for some years distributed in prizes among certain classes, and afterwards appropriated to the establishment of two Scholarships, the one in Mathematical and Physical Science, and the other in Mechanical Philosophy, Chemistry, and those branches of Natural History that are connected with the Arts and Manufactures.

The Marquis died in 1862, and his Deed of Settlement made

provision for the "annual payment, in all time coming, to the University of Glasgow, of the sum of £100, to be paid yearly to deserving students in this college, as scholarships or Bursaries, to be called the 'Breadalbane Scholarships,' in such manner as shall be fixed by the Senatus Academicus of the said University."

The following regulations have been approved by the Senate:—

The number of Scholarships shall be two, of £50 each per annum, for the encouragement of pure and applied Science.

The scholars shall be chosen, after competitive examination in Mathematics and Natural Philosophy, from among candidates who shall have taken the Degree of Master of Arts, or the Degree of Bachelor of Science in the Department of Engineering Science, at the University of Glasgow, within a period of not more than three years preceding the examination; provided always that students graduating at the supplementary graduation in November of any year, shall, for all purposes, be held to have graduated at the ordinary graduation in April immediately preceding.

Each scholar shall pursue such course of scientific study during the tenure of his Scholarship as the Senate shall in each case prescribe, and shall hold his Scholarship for three years; provided that at the end of the first and second years he give the Senate such evidence, by examination or otherwise, as the Senate shall deem sufficient, of having successfully prosecuted the prescribed course of study. The annual value of each Scholarship is now £55.

*Scholars*—<sup>1</sup> Robert Harvie, 1904; <sup>1</sup> Gilbert P. Hogg, 1904.

CARNEGIE FELLOWSHIPS AND SCHOLARSHIPS.—See pp. 177-184.

GEORGE A. CLARK BURSARIES OR SCHOLARSHIPS.—By the Will of the late Mr. George A. Clark, manufacturer, Paisley, a sum of £20,000 was bequeathed in 1872 to this University for the creation of four Bursaries, tenable each for four years. The following are the regulations:—

1. One of these Bursaries shall be competed for annually, at or immediately after the October examination for Degrees in Arts or Science.

2. The four Bursaries are assigned respectively to four of the Groups of Honours enumerated in Ordinance No. 11, Section XI., of the Universities Commission (1889), viz.:—(1) Classics; (2) Mental Philosophy; (3) Mathematics and Natural Philosophy; (4) English (Language, Literature, and British History).

For the Classics Bursary or Scholarship either Masters of Arts of this University who have taken the Degree of M.A. with Honours, or students presenting themselves for the final examination for the M.A. Degree with Honours in Classics, may be candidates; for the Mental Philosophy Bursary or Scholarship,

<sup>1</sup> Vacant through lapse of time.

either Masters of Arts of this University who have taken the Degree of M.A. with Honours, or students presenting themselves for the final examination for the M.A. Degree with Honours in Mental Philosophy, may be candidates; for the Bursary or Scholarship in Mathematics and Natural Philosophy either Masters of Arts of this University who have taken the Degree of M.A. with Honours, or students presenting themselves for the final examination for the M.A. Degree with Honours in Mathematics and Natural Philosophy, or Bachelors of Science of this University who have taken the Degree of B.Sc. in Pure Science, or students presenting themselves for the final examination for the B.Sc. Degree in Pure Science in the subjects of Mathematics and Natural Philosophy, may be candidates; and for the Bursary or Scholarship in English either Masters of Arts of this University who have taken the Degree of M.A. with Honours, or students presenting themselves for the final examination for the M.A. Degree with Honours in English, may be candidates.

But no student shall be eligible for the examination after the expiration of more than eight winter sessions from the time of his first entering a class qualifying for the M.A. Degree or the B.Sc. Degree.

3. The successful candidate shall undertake, during his tenure of the Bursary, to give such assistance in the teaching work of the University, and to follow such a course of study in the University, as the Senate may determine.

4. The subjects of examination each year shall be those which constitute the examination for Honours in one of the above-named Groups (the Group selected each year for examination to be publicly announced). The Senate reserve the right to withhold the Scholarship, should none of the Competitors reach the standard of attainment required of graduates in Arts with highest honours.

5. In the event of the examiners reporting in any year that no candidate has done sufficiently well in the subjects of that year to deserve the Scholarship, no appointment shall be made in that year; but it shall be in the power of the Senate to hold an examination for the same Scholarship, and in the same subjects, in the following year; provided that in that case the Scholarship shall be held for three years only and not for four, the surplus revenue being added to the capital of the fund. Should the same thing occur again, it shall be in the power of the Senate to appoint a Scholar for two years only, or for one year only, the examination in each case being in the same subjects as when the Scholarship was first competed for. In the same manner, in the event of a vacancy occurring in the tenure of any of the Scholarships otherwise than by lapse of time, the Senate may make an appointment for the remainder of the term for which the Scholarship might have been held by the student vacating it, and after examination in the same subjects as those for

proficiency in which the Scholar was originally appointed ; but in no case shall the regular rotation of subjects as above provided for be disturbed. In the competition for Scholarships to be held for less than four years, no student shall be admitted to examination who would not be eligible, as above arranged, for a Scholarship to be held for four years. In the event of a candidate being appointed to a vacancy to be filled for less than four years, and being still eligible, under the usual regulations as above, to compete for the said Scholarship on the occasion of the next regular vacancy, he shall be qualified to compete just as if he had not previously held the Scholarship, but in no case shall any student be permitted to hold the Scholarship for more than four years in all.

6. It shall not be competent for the holders of these Bursaries to hold any other Bursary or Scholarship in this University.

7. It shall be in the power of the Senate to deprive any Bursar of his Bursary, in the event of his not complying, to their satisfaction, with any of the above regulations.

8. The Examiners shall be the same as the Examiners for the Degree of M.A. with Honours in each of the several departments and for the Degree of B.Sc.

One of these Bursaries or Scholarships will be competed for, subject to the foregoing regulations, in October, 1907. It will be tenable for four years, and the examination will be in the third of the four groups above enumerated, viz., Mathematics and Natural Philosophy.

Candidates are requested to give in their names to the Assistant Clerk (Matriculation Office), not later than 16th September.

*Bursars*—1 William Miller, M.A., 1903 (Math. and Nat. Phil.); Robert Dewar, M.A., 1904 (English); William Manson, M.A., 1905 (Classics); Archibald A. Bowman, M.A., 1906 (Mental Philosophy).

JOHN CLARK (MILE-END) SCHOLARSHIPS.—By the Deed of Constitution regulating the John Clark Bursaries (see page 328), the Founder, Mr. John Clark, also instituted Scholarships of £50 annual value, open for competition to all Protestant students of good moral character, sons or daughters of Protestant parents, and who have completed their curriculum in Arts in Glasgow University. The Scholarships are to be awarded to the candidates who stand highest at written examinations in the branches of learning appointed by the trustees, and are tenable for four years, subject to the condition that the Scholars give their undivided time and attention to the prosecution of their studies with a view to any of the learned professions, or, on approval of the trustees, any other profession or business they may prefer. The trustees have resolved that they will not, in

<sup>1</sup> Vacant through lapse of time.

ordinary circumstances, appoint to a Scholarship any one who holds a Scholarship of equal or greater value, and that no student shall be eligible for the examination after the expiry of more than eight winter sessions from the time of his first entering a qualifying class. Three Scholarships are offered for competition in October, 1907 (each tenable for four years), one in the Group of Mathematics and Natural Philosophy, one in the Group of Semitic Languages, and one in the Group of English. The examination will be on the subjects prescribed for the Degree of M.A. with Honours in the respective Groups.

Names of candidates to be given in to the Assistant Clerk (Matriculation Office), and also to Mr. Kidston, 50 West Regent Street, Glasgow, on or before the 16th September.

*Scholars*—Robert N. Cross, 1904 (Mental Philosophy); John F. Tinto, 1904 (Math. and Nat. Phil.); James R. Buchanan, 1904 (Semitic Languages); Isabel M. Milligan, 1905 (English); Annie M. Macgregor, 1905 (Modern Languages); Margaret T. Robertson, 1905 (History); James Cunnison, 1906 (Economic Science); William M. Ogilvy, 1906 (Classics); Harold C. Rowse, 1906 (Mental Philosophy).

**JOSEPH COATS MEMORIAL SCHOLARSHIP.**—Founded in 1900 by the friends of the late Professor Coats, as a memorial of his distinguished services to Pathological Science, and in recognition of the ability and enthusiasm which he devoted to advance the teaching of the subject in Glasgow. The Scholarship is for the encouragement of original research in Pathology, is awarded biennially, and is tenable for one year. The Committee of subscribers paid over to the University Court £1,200, to the free proceeds of which for the two preceding years the Scholar is entitled during his year of tenure. Candidates must be graduates in Medicine in the University of Glasgow of not more than three years standing. The Scholarship will be awarded by the Senate on the results of a practical examination in Pathology, conducted by the Professor of Pathology with the assistance of two other members of the Faculty of Medicine to be appointed by the Senate in the beginning of October of every second year. The successful candidate must, for nine months following the award, prosecute research in Pathology with the Pathological Institute at the Western Infirmary, or in a Laboratory elsewhere approved of by the Faculty of Medicine, and shall not engage in Medical or Surgical practice during that period. The next appointment will be made in the beginning of session 1907-8.

*Scholar*—William B. M. Martin, M.B., Ch.B., 1905.

**ALEXANDER DONALDSON SCHOLARSHIP OR BURSARY.**—Founded in 1881 by Will of the late Mr. Alexander Donaldson, iron merchant

in Glasgow, who bequeathed to the Senatus of Glasgow University £1,000, to be administered by them as patrons for the endowment of a Scholarship or Bursary, at their discretion, in connection with the said University.

The following regulations were adopted by the Senate on 1st May, 1884 :—

1. The Scholarship shall be awarded to the candidate who, presenting himself for the first examination for the Degree of B.Sc. held in the month of April, shall stand highest in Chemistry.

2. The Scholarship shall be tenable for two years.

3. The second moiety of the second year's stipend shall be paid only after the Scholar has passed all the examinations for the Degree of B.Sc.

These regulations apply to students proceeding to the Degree of B.Sc. under the new regulations for that Degree.

The next appointment will be made after the B.Sc. examination in April, 1908.

*Scholar*—James Kirkland, 1906.

ROBERT DONALDSON SCHOLARSHIPS.—Founded in 1887 by the trustees of the late Mr. Robert Donaldson, iron merchant, Glasgow, who left £2,000 to the Senate for two Scholarships for such scientific purposes as the trustees should approve. The following tentative scheme has been approved by the trustees :—

1. The income of the fund shall be devoted for two years alternately to Scholarships in Chemistry and Biology.

2. Each Scholarship shall be tenable for two years.

3. Students who have taken the Degree of B.Sc. in Glasgow University shall be eligible.

4. The appointment shall be made by the Senate on a report as to the merits of the candidate or candidates by the Professor of the subject.

5. The scholar appointed shall devote himself for two years in this University, or for one year in this University and the other in such place as the Senate may approve, to research in the subject in which he has obtained the Scholarship. The holder of the Scholarship in Biology shall have the option of selecting Zoology or Botany as the subject of research.

6. The Senate are not bound to make an appointment unless the candidate is in their opinion qualified.

The appointment in November, 1908, will be in Chemistry.

*Scholar*—Helen M. Armour, M.A., B.Sc., 1906.

EGLINTON FELLOWSHIPS.—On the death of the Earl of Eglinton, formerly Rector of the University of Glasgow, a committee was formed to collect subscriptions for the purpose of commemorating in



a suitable manner his virtues and public services; and, subscriptions having been received to the amount of £7,000, it was resolved by the subscribers, in 1862, to set apart £4,500 out of this sum as a Scholarship or Fellowship Fund in the University of Glasgow.

By the Trust Deed of date November 8th, 1865, the net yearly produce of the said sum (after deducting expenses) is to be appropriated to the support of one or more Fellowships, not exceeding three, to be competed for by the alumni of the College of Glasgow, and to be held for a period not exceeding four years, upon the following conditions, viz.: First,—The number of Fellowships, and the period during which the same are to be held, shall from time to time be fixed by the *Senatus Academicus* of the said University. Secondly,—The competition for the Fellowships shall be open only to deserving students who shall have taken the Degree of Master of Arts in that University at the term preceding the competition, and the Fellowships shall be awarded by the *Senatus Academicus* of the University to those students who have shown themselves in a public competition to have acquired the greatest amount of knowledge and proficiency in the branches of study embraced in the curriculum of Arts, and such branches of Natural Science as the Senate shall, from time to time, require. And, Thirdly,—The Examination for the Fellowships shall be under the direction of the *Senatus Academicus* of the University, who shall fix the subjects of examination, and the relative value of each subject in the competition, and appoint any of their own number, or other fit persons, to be Examinators, and make such regulations with relation to the said Fellowships, and the competition and examination therefor, as from time to time they may think fit.

The following are the regulations of the Eglinton Fellowships:—

1. The number of the Eglinton Fellowships shall be two (of about £65 per annum each), tenable for three years, subject to the approval of the Senate at the end of the first and second year.

2. The competition for the Fellowship shall be open only to deserving students who shall have taken the Degree of Master of Arts in the University of Glasgow, at the term preceding the competition.<sup>1</sup>

3. One of the Fellowships shall be open to competition in October, 1866, and thereafter triennially (1908); and the other in October, 1867, and thereafter triennially (1909).

4. The successful candidate shall undertake, during his tenure of the Fellowship, to follow such a course of study in the University, or to give such assistance in the teaching work of the University, as the Senate may determine.

5. The Examination for the Eglinton Fellowship to be competed

<sup>1</sup> i.e. Either at the ordinary graduation in April or at the supplementary graduation in November.

for in October, 1890, and thereafter sexennially (1908), shall be in Classics; and the Examination for the Eglinton Fellowship to be competed for in 1893, and thereafter sexennially (1911), shall be in Mental Philosophy.

The subjects of examination in Classics and Mental Philosophy respectively shall be the same as those for the Degree of Master of Arts with Honours.

6. The Examination for the Eglinton Fellowship to be competed for in October, 1897, and thereafter sexennially (1909), shall be in Mathematics and Natural Philosophy; and the Examination for the Eglinton Fellowship to be competed for in October, 1900, and thereafter sexennially (1912), shall be in English (Language, Literature, and British History).

The subjects of examination in Mathematics and Natural Philosophy and in English respectively shall be the same as those for the Degree of Master of Arts with Honours.

7. The Eglinton Fellowship shall not be held along with the Snell Scholarship, or Breadalbane Scholarship, and the holder of the Luke Fellowship or of the Metcalfe Fellowship shall not be admitted to compete for the Eglinton Fellowship.

The next ordinary competition will take place in October, 1908, the subject of examination being Classics.

*Fellows*—Henry M. Trafford, M.A., 1905 (Mental Philosophy); Octavia J. R. Bennett, M.A., and James M'Arthur, M.A., 1906 (English).

**WILLIAM EUING FELLOWSHIPS.**—Founded in 1874 by Mr. William Euing, insurance broker, Glasgow, who by his Will bequeathed to the University, along with a library of rare and valuable books, the sum of £6,000 for the endowment of three Fellowships, each of the value of £80 per annum, and tenable for not more than five years. The Fellowships are open only to deserving students who have completed the regular curriculum in Arts, and taken the Degree of M.A. at this University, and are awarded after competition in the subjects of the Arts curriculum. The Fellows are required to reside in Glasgow for at least nine months in the year, and "to open private classes of limited numbers, for giving instruction to, and aiding students of the University—more especially during the vacation, or such part thereof as may be found expedient—in such studies as may be auxiliary to, or illustrative of, the course of lectures which such students may have attended, or be desirous of attending, and also to carry out the same purpose by a systematic course of private tuition."

One Fellowship is attached to the department of Classics, one to the department of Mathematics and Natural Philosophy, and one to the department of Mental Philosophy, including Logic, Moral Philosophy, and English Literature.

The Senate have issued the following regulations for the competition for these Fellowships :—

1. In the department of Classics there shall be one Fellowship competed for in October, 1875, and thereafter at intervals of four years (1907), the period for which the Classical Fellowship shall be ordinarily tenable.

2. In the department of Mental Philosophy one Fellowship shall be competed for in October, 1876, and thereafter at intervals of three years (1909), the period for which the Fellowship in the department of Mental Philosophy shall be ordinarily tenable.

3. In the department of Mathematics and Natural Philosophy one Fellowship shall be competed for in October, 1875, and a Fellow appointed for two years; the Mathematical Fellowship becoming vacant in October, 1877, shall be filled up for a period of three years, the period for which the Fellowship in this department shall be ordinarily held.

In the event of a candidate being appointed to a vacancy to be filled for less than four years in the department of Classics, or for less than three years in the department of Mental Philosophy, or of Mathematics and Natural Philosophy, and being still eligible, under the usual regulations as above, to compete for the said Fellowship on the occasion of the next regular vacancy, he shall be qualified to compete just as if he had not previously held the Fellowship, but in no case shall any student be permitted to hold the Fellowship for more than four years in all, or three years in all, respectively.

*Fellows*—<sup>1</sup> Robert K. Goodfellow, M.A., 1903 (Classics); Robert A. C. Macmillan, M.A., 1906 (Mental Philosophy); <sup>1</sup> Elizabeth G. Morison, M.A. (1906), 1904 (Math. and Nat. Phil.).

EXHIBITION (1851) SCIENCE RESEARCH SCHOLARSHIPS.—Her Majesty's Commissioners for the International Exhibition of 1851 have instituted Science Scholarships, each of the annual value of £150, and tenable for two years, subject to the scholar's first year's work being deemed satisfactory by the Scientific Committee of the Commissioners. The nomination to a Scholarship has been placed at the disposal of this University in each year since 1891, and it is anticipated that similar arrangements will be made in future years.

Candidates must be British subjects, and must have been students of Science in some approved institution or institutions for a period of three years, at least the third year of the period having been spent in this University. Capacity for original research tending to advance Science or its applications is required as the main qualification. The Scholarships may be held at any University in England or abroad, or in some other institution approved of by the Commissioners; and every scholar will, in the absence of special circum-

<sup>1</sup> Vacant through lapse of time.

stances, be required to proceed to an institution other than that by which he is nominated. He must devote himself to some particular scientific work in connection with those branches of Science, such as Physics, Mechanics, and Chemistry, the extension of which is especially important to our national industries. A sum of £25 is reserved from the fourth half-yearly instalment, and paid by the Commissioners on receipt from the Scholar, after the expiration of his Scholarship term, of a satisfactory report of his study and research during the term.

When a nomination falls to be made in any year, due notice will be given to enable candidates to lodge their applications with the Clerk of Senate before the middle of March. Every application must be accompanied by a statement of the scientific study (including original research) in which the candidate has been engaged, and of the work to which he proposes to devote himself if appointed to the Scholarship.

*Scholars*.—Robert Jack, M.A., B.Sc., 1906; David Thomson, M.A., 1907.

**FERGUSON SCHOLARSHIPS.**—With a view to the encouragement of the higher learning in Scotland, the trustees of the late Mr. Ferguson, of Cairnbrock, out of his legacy of £50,000 for educational and other purposes, instituted in 1860 six Scholarships, each of the value of £80 per annum, to be held for two years, and to be called "The Ferguson Scholarships."

The examination of candidates for three of these Scholarships will be held in Glasgow, on Tuesday, 24th September next, and two following days. One of the Scholarships will be awarded for the greatest proficiency in Classics; one for the greatest proficiency in Mathematics, including Natural Philosophy; and one for the greatest proficiency in Mental Philosophy, including Logic, Psychology, Metaphysics, Moral Philosophy, and History of Philosophy.

Subjects for examination—

**CLASSICAL SCHOLARSHIP.**—Latin Prose Composition; Latin Translation; Greek Prose Composition; Greek Translation. General—(a) Critical; (b) Greek and Latin History; (c) Greek and Latin Literature. Verse Composition, either in Greek or Latin; or an original Latin Essay on some subject connected with Ancient History, Literature, or Life.

**MATHEMATICAL SCHOLARSHIP.**—*Mathematics*.—Euclid's Elements. Modern Geometry. Algebra, including Determinants, Finite Differences, and Theory of Equations. Trigonometry, Plane and Spherical. Analytical Geometry, in two and three dimensions. Differential and Integral Calculus, and Differential Equations.

*Natural Philosophy.*—Abstract Dynamics (commonly called Mechanics), including Kinematics and Statics and Kinetics of Solids and Fluids. Acoustics, Heat, Light, Magnetism and Electricity, treated both mathematically and experimentally.

Candidates will be allowed a choice of questions, and may obtain full marks by showing good general knowledge and an intimate acquaintance with any branches they may have specially studied.

**PHILOSOPHICAL SCHOLARSHIP.**—*Logic.*—Province and History of Logic. Notions, Judgments, and Inferences. Recent developments of Formal Logic. Fallacies. Theory and Methods of Scientific and of Historical Proof.

*Psychology and Metaphysics.*—The Phenomena and Laws of Mental Life and of its Development. Theory of Knowledge. Theory of Reality.

*Moral Philosophy.*—Psychology and Metaphysics of Ethics. Relations of Ethics to Law, Politics, and Economics. Applied Ethics.

*History of Philosophy.*—History and Critical Analysis of Ancient and Modern Systems of Philosophy.

The competition will be open to all persons who have passed the Examinations required for the Degree of Master of Arts in one of the Universities of Scotland (whether taking the Degree at the same time or not), provided that, at the time of the competition, not more than six years have elapsed since the date of their first entering a class qualifying for the M.A. Degree, and who have not already gained one of these Scholarships.

The Examinations will be conducted in writing, and the Scholarships awarded on the report of the Examiners as to the merit of the Candidates, but the minimum of 60 per cent. of the possible marks must be reached in order to entitle to a Scholarship.

The Scholarships, of £80 each per annum, are tenable for two years, subject to fulfilment of the following rule of the trustees:—

“Persons gaining the Scholarships will be expected, during the “tenure thereof, to prosecute studies in furtherance of the higher “learning; and those who have not graduated shall be required to “do so before the last payment is made.”

Certificates will be granted to such of the unsuccessful competitors as, in the opinion of the Examiners, shall have taken a distinguished position in the Examinations.

Candidates are requested to give in their names, personally or by letter, at the office of THE FERGUSON BEQUEST FUND, 94 Bath Street, Glasgow, before 2nd September, 1907, and due intimation will be sent to those enrolled as to the place and hours of Examination.

The following Students of the University of Glasgow have obtained Ferguson Scholarships:—

1868, James Smith, Mathematical; 1869, Archibald B. Cameron, Philosophical; 1870, John Cross, Classical; 1870, James Orr, Philosophical; 1872, Wm. W. Waddell, Classical; 1873, Thomas H. Miller, Mathematical; 1874, William Patrick, Philosophical; 1875, William Y. King, Classical; 1878, John M.A. Dodds, Mathematical; 1878, Thomas B. Kilpatrick, Philosophical; 1882, Robert F. Muirhead, Mathematical; 1883, James A. McCallum, Philosophical;

1886, James Buchanan, Mathematical ; 1886, Andrew F. Smith, Philosophical ; 1888, Ernest F. Scott, Classical ; 1889, Evan Keri Evans, M.A., Philosophical ; 1890, Abraham Levine, M.A., Mathematical ; 1891, James Holm, M.A., Mathematical ; 1893, Horatio S. Carslaw, M.A., Mathematical ; 1897, William Boyd, M.A., Philosophical ; 1898, George D. Valentine, M.A., Mathematical ; 1899, Robert D. Bell, M.A., Classical ; 1900, David K. Picken, M.A., Mathematical ; 1901, David M. Stewart, M.A., Mathematical ; 1901, Alexander D. Lindsay, M.A., Philosophical ; 1902, Francis P. H. Stirling, M.A., Mathematical ; 1905, John Waugh Scott, M.A., Philosophical ; 1906, John Rankine Brown, M.A., Classical ; 1906, Archibald Allan Bowman, M.A., Philosophical.

*Present Holders of the Scholarships.*—John Fraser, M.A., of Aberdeen University, Classics, 1905 ; John Gray, M.A., of Aberdeen University, Mathematics, 1905 ; John W. Scott, M.A., of Glasgow University, Mental Philosophy, 1905 ; John R. Brown, M.A., of Glasgow University, and John L. Michie, M.A., of Aberdeen University, equal, Classics, 1906 ; Robert H. Moody, M.A., of Aberdeen University, Mathematics, 1906 ; Archibald A. Bowman, M.A., of Glasgow University, Mental Philosophy, 1906.

**FOULIS MEMORIAL SCHOLARSHIP.**—This Scholarship was founded in 1882 in memory of the late David Foulis, M.D., Glasgow, who had distinguished himself in Pathology and Surgery, and died at the age of 35 years. It is to be awarded as often as the accumulated income from the invested funds amounts to £50. It is tenable by a graduate or licentiate whose professional education has, to the extent of not less than two years, been received at the University or one of the extra-mural schools of Glasgow ; and who shall, in the opinion of the trustees, have manifested a capacity for original work in the department of Pathology. The purpose of the Scholarship is to assist in the prosecution of such work in one of the Medical Schools in or forth of Scotland, approved of by the trustees ; and the trustees have power to determine whether it should be awarded by competition or otherwise.

The trustees are the Professor of Practice of Medicine in the University, the President and Visitor of the Faculty of Physicians and Surgeons of Glasgow, and the Pathologists of the Western and Royal Infirmaries. Further particulars may be obtained from Messrs. J. M. Taylor, Nelson, Walker & Co., 180 St. Vincent Street.

*Scholar—*

**THE GROCERS' COMPANY'S SCHOLARSHIPS.**—The Grocers' Company of London, with the object of encouraging Original Research in Sanitary Science, offer annually to British subjects, under thirty-five years of age, two Scholarships, each of £300 a year, with an allowance to meet the cost of apparatus and other expenses in connection with the work, tenable for one year from the first day of

June, and renewable for a further period of one year or of two years. Candidates are required to state the nature of the research proposed, and no subject which does not come, broadly speaking, under the category of an inquiry into the Causation of Prevalent Disease or as to Means of Prevention of Premature Death will be considered eligible. When a vacancy occurs applications should be sent in before the first day of April to the Clerk of the Grocers' Company, Grocers' Hall, London, E.C., from whom a form of application and further information may be obtained.

**WILLIAM HOULDSWORTH RESEARCH STUDENTSHIP.**—In March, 1898, the late William Houldsworth, merchant in Glasgow, in recognition of the distinguished services of his friend, Lord Kelvin, to the cause of scientific research, made over to the University the sum of £5600 invested in Great Eastern Railway Four per cent. Debenture Stock, to provide a Research Studentship in connection with the Faculty of Science. Candidates must be students of at least two years' standing in the University of Glasgow. The studentship is tenable for two years, and the holder must prosecute his work with diligence and regularity so as to receive from the Professor of Natural Philosophy a certificate of creditable success. A proportion, viz., four-fifths, of the annual income is payable without deduction to the Research Student for personal expenses, and the remaining fifth part, after meeting the expenses of administration, is applied in payment of laboratory expenses and materials in connection with the Research Student's work, and in payment of his matriculation fees and of the fees for such Science Classes, if any, at the University as he may attend with the approval of the Senate. The said one-fifth part of the income must be expended at the sight and to the satisfaction of the Professor of Natural Philosophy or upon orders granted by him, and the Research Student is required to furnish the Professor with a statement showing the sums so expended in each session, and also during his tenure of the Studentship. Any surplus remaining over shall be added to the principal of the fund. In the event of the Studentship falling vacant otherwise than by lapse of time, the Senate may immediately make another appointment for a period not exceeding two years, and in the event of the Senate considering it not advisable at any time to make an appointment on the occurrence either of a casual vacancy or of a vacancy in regular course, the same may be deferred, and the income thus left unused shall be added to the principal of the fund.

When a vacancy occurs, the applications of candidates must set forth the particulars required by Ordinance No. 61, Section III. See page 167.

*Research Student*—Alexander D. Ross, 1906.

**LLOYD'S REGISTER SCHOLARSHIP**—In 1889 the General Committee of Lloyd's Register of British and Foreign Shipping intimated

their intention of establishing a Scholarship of the yearly value of £50, tenable for three years by students of Naval Architecture in this University. In 1893 two additional Scholarships, each of the same value and tenure of the first, were announced. They are open to competition to candidates whose age does not exceed 23 years. Each candidate must produce satisfactory evidence that £50 a year would enable him to pursue his studies, and that he would be unable to do so unless this aid were afforded. The subjects of examination are the following :—Euclid, Books I. II. III. IV. VI. and XI.; Algebra, including Quadratic Equations, the three Progressions, and Binomial Theorem; Plane Trigonometry, with use of Logarithms; Elements of Statics, Dynamics, and Hydrostatics; Practical Shipbuilding; Mechanical Problems. A preference will be given to a candidate who possesses a thorough grammatical knowledge of English and of either French or German, although he may be somewhat deficient in the other subjects prescribed. One Scholarship will be open to competition in October, 1907. Names of Candidates to be sent to the Assistant Clerk (Matriculation Office) on or before 16th September, 1907.

*Scholars*—<sup>1</sup> William Thomson, 1904; Ernest Sutton, 1905; Thomas Graham, 1906.

PATRICK A. LOWSON MEMORIAL SCHOLARSHIP—1873.—Capital Funds, £2,100. The Scholarship is tenable for two years, and is worth, subject to certain conditions, not less than £60 per annum, and is at present £70 per annum. Candidates must have attended three years, not necessarily consecutive, at a school or schools in Dundee or Broughty Ferry, and may have attended, for not more than one session, any University or College in the United Kingdom. Trustees, the Parish Minister of Dundee, the Lord Provost of Dundee, the President of the Chamber of Commerce (*ex officio*), and William Lowson, J. G. F. Lowson, J. C. Buist, Robert B. Don, George K. Smith, Charles G. Gourlay, and Archibald W. Sturrock. Factor, Robert Morton, Savings' Bank, 2 Euclid Street.

*Scholar*—David W. Cameron (at Edinburgh University), 1906.

LUKE FELLOWSHIP.—In 1863, the late William Luke, Esq., of Edinburgh, bequeathed to the University of Glasgow the sum of £3,000 sterling, "to perpetuate the memory of his nephew George Rankin Luke" (formerly a highly distinguished student of this University, and afterwards student of Christ Church, Oxford), "in such a manner as his esteemed friend, Professor Nichol, may consider most beneficial." Professor Nichol exercised the discretionary power thus conferred on him by directing that the sum bequeathed

<sup>1</sup> Vacant through lapse of time.



should be applied to the founding of a Luke Fellowship. The following are the regulations:—

1. There shall be a single Luke Fellowship (of about £95 per annum), tenable for three years, subject to the approval of the Senate at the end of the first and second years.

2. The Luke Fellowship shall be awarded on examination on English Literature, and on prescribed periods in History.

3. The Luke Fellowship shall be open to competition in October, 1868, and thereafter triennially.

4. Competitors for the Luke Fellowship must be Masters of Arts of this University, of not more than three years' standing; provided always that students graduating at the supplementary graduation in November of any year shall, for all purposes, be held to have graduated at the ordinary graduation in the April immediately preceding.

5. The Luke Fellowship shall not be held along with the Snell Scholarship, the Clark Scholarship, the Eglinton Fellowship, or the Euing Fellowship.

6. Students who have competed at one Luke Fellowship Examination shall not be admitted to another, nor shall the holder of the Eglinton Fellowship; but in the event of a candidate's being appointed to a vacancy to be filled for less than three years, and being still eligible, under the usual regulations as above, to compete for the Luke Fellowship on the occasion of the next regular vacancy, he shall be qualified to compete just as if he had not previously held the Fellowship, but in no case shall any student be permitted to hold the Fellowship for more than three years in all.

Ordinance No. 100 of the Universities Commission (1889) prescribes that the provisions of Ordinance No. 57 shall apply to the Luke Fellowship, but provides that it shall not be a condition of tenure of the Fellowship that the holder shall give assistance in teaching the class of English Literature.

The next competition for the Luke Fellowship will take place in October, 1907, the subjects being those for Honours in English (Language, Literature, and British History).

*Fellow*—<sup>1</sup> John R. Cameron, 1904.

M'CUNN MEDICAL RESEARCH SCHOLARSHIPS.—These Scholarships were instituted in 1904 by the Trustees of Mr. William M'Cunn, of Landour, Largs, who died on 29th July, 1896. They are four in number, each of the annual value of £100, and tenable for one year, subject to reappointment for another year in the discretion of the Trustees. They are open to Graduates in Medicine of a Scottish University, provided that not more than two years shall have elapsed since the candidate has taken his or her degree. The

<sup>1</sup> Vacant through lapse of time.

subjects are eight in number, divided into two groups, viz. : Group A.—Medicine, Surgery, Pathology, Bacteriology. Group B.—Therapeutics, Public Health, Physiology, Physiological Chemistry. In 1905 scholarships were to be awarded for the encouragement of original research in one or more of the four subjects in Group B ; and in 1906 four or less if reappointments are made as above mentioned will be awarded in like manner in Group A. A candidate must be nominated by a Professor or Lecturer in a Scottish University, or by a Teacher in Scotland recognised for the purpose of Graduation in Medicine by a Scottish University. Nominations must be lodged with the Secretaries of the Trust on or before the first day of September, and candidates shall undergo a written examination to be held in Glasgow in the month of October. The scholars shall be appointed by the Trustees, and shall during the year of tenure prosecute research in one or more of the subjects for that year in such institutions, either at home or abroad, as may be approved by the Trustees. For further information and for nomination forms apply by letter to Messrs. McInnes, Mackenzie, and Lochhead, the Secretaries of the Trustees, 7 Gilmour Street, Paisley.

*Scholars*—William M. Scott, M.B., Ch.B., Edinburgh, 1906 ; Janie H. McIlroy, M.A., B.Sc., M.B., Ch.B., Glasgow, 1906 ; Jane R. Shaw, M.B., Ch.B., Glasgow, 1906.

**MACKAY SMITH SCHOLARSHIPS.**—One in Natural Philosophy, the other in Chemistry, each of the annual value of £48, and tenable for two years in the Universities of Edinburgh and Glasgow alternately. During sessions 1882-83 and 1883-84 they were held in the University of Edinburgh, and during sessions 1884-85 and 1885-86 in the University of Glasgow. The next examination will be held in this University at the close of session 1905-9. Candidates must have already attended, or must be then attending the class of Natural Philosophy or Chemistry respectively. The Scholarship in Chemistry will be awarded on an examination held at the same time and of the same scope as the Final Science Examination in that subject for the Degree of B.Sc. in Pure Science, and the Scholarship in Natural Philosophy on an examination held at the same time and of the same scope as the examination in that subject for the degree of M.A. with Honours.

**MACKINNON SCHOLARSHIP.**—By the will of the late Sir William Alexander Mackinnon, K.C.B., LL.D., Surgeon-General of Her Majesty's Army and Director-General of the Army Medical Staff, a sum of £2000, less legacy duty, was bequeathed to this University for the foundation of a Scholarship. The Scholarship is to be awarded to the person who shall in each year show the greatest proficiency in a competitive examination in (1) Geology, (2) Natural History (with Comparative Anatomy), and (3) Modern Foreign

Languages, the examination in each subject to be held every third year. The subjects are to be taken in rotation, commencing in such order as the University authorities shall determine. In the event of the Scholarship not being awarded in any year, the amount of the Scholarship with any accumulations shall be added to the amount to form the Scholarship in the same subject on the recurrence of the examination therein.<sup>1</sup>

The following are the regulations :

1. The rotation of subjects shall be as follows :—Modern Foreign Languages at the Autumn Degree Examination, 1903 ; Natural History (with Comparative Anatomy) in Autumn, 1904 ; and Geology in Autumn, 1905, and so on thereafter.

2. The examination in Modern Foreign Languages shall be the same, and shall be held at the same time as the examination for Degrees in Arts with Honours in Modern Languages.

3. The examinations in Natural History (with Comparative Anatomy) and in Geology shall be the same and held at the same time as the Final Science Examination in these subjects for the Degree of B.Sc.

4. The holder of the Scholarship in one year shall be eligible for reappointment the next year, provided he is found qualified on examination in the subject for that year ; provided also that no candidate shall hold the Scholarship more than once in any subject.

5. The order of merit shall be fixed by the examiners at each examination, but no appointment in the Science subjects shall be made unless the candidate highest on the list shall have obtained at least 65 per cent. of the attainable marks.

6. Should the Mackinnon Scholarship in Geology fall vacant at the same time as the Baxter Demonstratorship, the two appointments may be held concurrently.

Subject to these regulations, an appointment falls to be made after the examinations in October, 1907, to the Scholarship in Natural History (with Comparative Anatomy).

**METCALFE FELLOWSHIP.**—Founded by the late Miss Sarah Metcalfe, Glasgow. (See under Metcalfe Bursaries, p. 367.)

The following are the regulations of the Metcalfe Fellowship :—

1. There shall be a Fellowship on the Metcalfe Foundation of the annual value of £100, tenable for three years, to be competed for in October, 1872, and thereafter triennially (1908).

2. Candidates must be Masters of Arts with Honours in the Group of Mathematics and Natural Philosophy, of not more than three years' standing, provided always that students graduating at the supplementary graduation in November of any year shall for all purposes be held to have graduated at the ordinary graduation in the April immediately preceding.

<sup>1</sup> The Scholarship in Modern Languages, open in 1906, was not awarded.

3. The examination shall be the examination for the Degree of Master of Arts with Honours in the Group of Mathematics and Natural Philosophy.

4. The Fellowship shall be held subject to the condition of pursuing in the University of Glasgow a course of study in such of the following subjects—viz., Higher Mathematics, Astronomy, Civil Engineering, and Chemistry—as the Senate shall in each case prescribe.

5. The Metcalfe Fellowship shall not be held along with the Eglinton Fellowship, the Snell Scholarship, or the Breadalbane Scholarship; and the holder of the Eglinton Fellowship shall not be allowed to compete for the Metcalfe Fellowship; but in the event of a candidate being appointed to a vacancy to be filled for less than three years, and being still eligible, under the usual regulations as above, to compete for the said Fellowship on the occasion of the next regular vacancy, he shall be qualified to compete just as if he had not previously held the Fellowship, but in no case shall any student be permitted to hold the Fellowship for more than three years in all.

*Fellow*—George D. C. Stokes, 1905.

**MINING SCHOLARSHIPS.**—The Institution of Mining and Metallurgy, Salisbury House, London, offers annually two Scholarships of £50 each to Graduates under 25 years of age to assist them in taking a practical course in Mines or Works at home or abroad. For particulars apply to the Clerk of Senate or to Mr. Charles Latham, the Lecturer on Mining at the University.

**REID STEWART FELLOWSHIP.**—Mr. James Reid Stewart, Ironmaster, Glasgow, who died on 8th August, 1896, directed his Trustees to pay a legacy of £2000, under deduction of legacy duty, to the Senate, the free income of which is to be applied in and towards a Fellowship to be called the Reid Stewart Fellowship.

The following are the regulations :—

1. Candidates must be Masters of Arts who have taken the Degree of M.A. with Honours in either the Group of History or the Group of Economic Science, or be students presenting themselves for the final examination for the M.A. Degree with Honours in either of these Groups. The Fellowship shall alternate between History and Economic Science, beginning with History and giving three years to each.

But no student shall be admitted to the examination after the expiry of more than three winter sessions from the time of his completing the course necessary for the Degree of M.A. with Honours in either of these Groups.

2. The papers set in the examination shall be the same as the papers set for Honours in these Groups at the October examinations for Degrees in Arts, and the Examiners shall be the Examiners for the Degree of M.A. with Honours in these Groups. The Fellowship will be awarded for excellence in one Group, but not in both.

3. The Fellowship shall be tenable for three years, subject to the condition that the holder give his time and attention to the prosecution of his studies with a view to one of the learned professions or to such professional or business avocation as may be approved of by the Senate.

4. In the event of a vacancy occurring otherwise than by lapse of time, it shall be in the power of the Senate to appoint, after competition under the same conditions as above, either for the unexpired period of the vacated Fellowship or for the full period of three years. If the Fellowship is offered for a period of less than three years, the conditions of competition and tenure shall be the same as those stated above, provided that no student shall be excluded from the competition who was eligible when the Fellowship was last offered for three years.

5. In the event of the Examiners reporting in any year that no candidate has done sufficiently well to deserve the Fellowship, no appointment shall be made on that occasion, but the Fellowship shall be offered for competition in the following year under the same conditions as in the case of a vacancy occurring otherwise than by lapse of time.

6. It shall not be competent for the holder of the Reid Stewart Fellowship to hold any other Bursary, Scholarship, or Fellowship in this University, without the special leave of the Senate. The next competition will take place in October, 1908, and the examination will be the examination for Honours in the Group of Economic Science.

*Fellow*—David B. Mungo, LL.B., 1905.

SANDFORD SCHOLARSHIP.—Founded in 1862 (by the investment of a sum of £520, raised by subscription), in memory of Sir Daniel K. Sandford, the eminent Professor of Greek in this University, who died in 1838. It is tenable for two years, and is awarded to the student who, on examination, gives proof of the greatest proficiency in the Greek language. Value about £20 per annum.

The examination of candidates for this Scholarship takes place every alternate year in the month of April (1908), and is open to all matriculated students (not Masters of Arts) who have attended the Public Greek Classes for not less than two sessions.

The subjects of examination are selected from the following authors:—Homer, 12 books; Herodotus, 4 books; Sophocles, 3 plays; Thucydides, 4 books; Æschylus, 3 plays; Demosthenes, one or more orations; Aristophanes, 3 plays; Xenophon's *Memorabilia*; Pindar; Plato, one or more dialogues.

Candidates are examined on not more than four of the above-mentioned authors (of which Homer is always one)—two in prose and two in verse; and the subjects for each examination are given out by the examiners at the end of the session previous to that in

which the examination takes place. Candidates are also examined on Translations from Greek into English, with Criticisms, and Translations, in prose and verse, from English into Greek.

The subjects for April, 1908, will be :—Homer, *Iliad*, xiii.-xxiv. ; Sophocles, *Electra*, *Philoctetes*, *Trachiniae* ; Demosthenes, *Against Meidias* ; Plato, *Phaedrus* and *Symposium* ; Unseen Translation ; Prose Composition and Iambic Verse if any Candidate offers it.

*Scholar*—Thomas N. McIlravy, 1906.

(SIR WALTER) SCOTT SCHOLARSHIP.—(See under head "Scott Bursaries," p. 378).—This Scholarship, in value £80 per annum, is open for competition to Masters of Arts in the University of Glasgow of not more than three years' standing, having graduated with Honours in Classics or in Mental Philosophy, or to students who, at the time of competition, are presenting themselves for the final examination in the said University for the M.A. Degree with Honours in Classics or in Mental Philosophy. The examination to be in Classics, Mental Philosophy, and English Literature, which may include History. The Scholarship is tenable for two years, and the holder is required to follow such a course of study in the University of Glasgow, or give such assistance in the teaching work of the University as the Senatus Academicus may determine. The Scott Scholarship is not to be held along with any other Scholarship, Fellowship, or Bursary of the University of Glasgow. "The subjects of examination for the said Scholarship shall be, with the addition after-mentioned, Classics, or Mental Philosophy, or both of these, the special subjects being those for the examination for the M.A. Degree with Honours in the given department or departments for the year, and in addition to the examination above-mentioned the competitors for the said Scholarship shall undergo an examination in English Literature of a higher kind than that required for an ordinary pass." The Scholarship will be open to competition in October, 1908. The examination will be in Mental Philosophy and in English Literature (not Language) from Chaucer downwards.

*Scholar*—Oswald J. Gardner, M.A., 1906.

SHAW PHILOSOPHICAL FELLOWSHIP.—This Fellowship was founded by subscription in 1867, in the University of Edinburgh, in memory of Sir J. Shaw, Bart., who was born at Mosshead, in the Parish of Riccarton, and County of Ayr, in 1764, was elected Lord Mayor of London in 1805, and M.P. for the same city in 1806, and after a long and distinguished career, died in London in 1843; and is open to the competition of the Graduates in Arts of any of the Scottish Universities. The Fellowship consists of the free proceeds of the sum of £4,100 mortified to the Senatus Academicus of the University of Edinburgh under the following conditions, namely :—

1. The said Fellowship shall bear the name of "THE SHAW PHILOSOPHICAL FELLOWSHIP," in memory of the said Sir James Shaw, Baronet.

2. The Patronage of the said Shaw Philosophical Fellowship shall belong to the said Senatus Academicus, and shall be exercised by them, subject to the conditions herein contained, for the encouragement of the study of Logic, Metaphysics, Psychology, Moral Philosophy, and the History of Philosophy.

3. The Fellowship shall be awarded by competitive examination in the subjects of Logic, Metaphysics, Psychology, Moral Philosophy, and the History of Philosophy.

4. The Fellowship shall, on each occasion of an appointment thereto, be open to the competition of Graduates in Arts of the Scottish Universities—that is to say, the University of Edinburgh, the University of Glasgow, the University of Aberdeen, and the University of St. Andrews, of not more than five years' standing at the time of the competition, and of all students of the said Scottish Universities who, although they have not graduated in Arts, shall yet have successfully passed the last of the examinations necessary for such graduation in Arts, within the period of five years before the time of the competition; and the said Senatus of the University of Edinburgh, with consent of the Senates of the other Scottish Universities aforesaid, or of a majority of them, and with the concurrence of the University Court of the University of Edinburgh, shall have power either to increase or to reduce the number of years of standing as graduates, or as students who have passed all the examinations necessary for graduation, as above fixed, for competitors for the Fellowship.

5. The Fellowship shall be tenable for five years only, but the said Senatus Academicus of the University of Edinburgh shall have power, with consent of the Senates of the other Scottish Universities aforesaid, or of a majority of them, and with the concurrence of the University Court of the said University of Edinburgh, to extend, with reference to all holders of the Fellowship, the term of tenure to any period of years not exceeding ten, if, in the course of time, it shall appear to them desirable to do so, from an increase in the number of foundations of a similar kind in the University of Edinburgh, or in the other Scottish Universities, or other sufficient reason.

6. The competitive examination for the said Fellowship shall, except in the case below provided for, be conducted by two Examiners, to be appointed in the manner following—to wit, one of the Examiners shall be appointed by the Senatus Academicus of the University of Edinburgh, either from among the members of the said Senatus or others, as they may think proper, and the other Examiner shall be appointed by the Senatus Academicus of one of the other Scottish Universities in rotation.

7. The said Examiners, so appointed, shall report their opinion of the result of the examination to the Senatus Academicus of the University of Edinburgh, who shall, as patrons of the said Fellowship, appoint thereto the candidate who appears by the report to be best qualified by proficiency in the subjects of Logic, Metaphysics, Psychology, Moral Philosophy, and the History of Philosophy, provided that, as required by the clause next following, such best qualified candidate shall, in the opinion of both the Examiners, have manifested a sufficiently high degree of proficiency to merit the Fellowship.

9. Each holder of the said Fellowship shall, during his tenure thereof, be entitled to receive the annual proceeds of Four Thousand One Hundred Pounds, and of any addition of the said sum which may hereafter be made thereto, as after-mentioned, after deducting all reasonable expenses, including the payment of remuneration to the Examiners appointed as aforesaid.

12. It shall not be competent for any person to hold the said Fellowship along with any other Fellowship, Scholarship, or Bursary, in any Scottish University, or appropriated to the students of any Scottish University or Universities.

17. It shall be in the power of the Senatus Academicus of the University of Edinburgh to require the holder of the Shaw Philosophical Fellowship during the fourth or fifth year of his tenure of it, to deliver in the University of Edinburgh a Course of Lectures, not exceeding four, on any of the subjects for the encouragement of the study of which the Fellowship has been founded; and notice shall be given to the holder of the Fellowship twelve months previously to the time fixed for the delivery of the said Lectures that he is required to deliver them; but the said Senatus, with consent of the University Court of the University of Edinburgh, shall have power to alter the number of Lectures, if it shall be found desirable to do so.

*Present Fellow*—Alexander D. Lindsay, M.A. (of Glasgow University), 1904.

**SNELL EXHIBITIONS.**—In the year 1677, Mr. John Snell of Uffeton, in the County of Warwick, a native of Scotland, and formerly student in this University, devised to trustees a considerable estate near Leamington, in Warwickshire, for educating Scottish students at Oxford.

The Exhibitioners are now elected under a scheme settled in the Court of Chancery in 1872. Under the provisions of this scheme it was then arranged that the number of Exhibitions should be limited to fourteen, it being lawful to elect three in each year, unless the number on the Foundation should thereby be increased beyond fourteen, in which case not more than two were to be elected, the Exhibition being tenable for five years; but by an agreement of



date 2nd April, 1878, under provisions of the same scheme, the following regulations were sanctioned :—

1. The stipend of each Exhibitioner admitted to the foundation after the 31st day of December, 1878, shall be £132.

2. Until the 31st day of December, 1880, the greatest number of Exhibitioners shall be twelve.

3. During the year from the 31st day of December, 1880, to the 31st day of December, 1881, the greatest number of Exhibitioners shall be eleven.

After the 31st day of December, 1881, the greatest number of Exhibitioners shall be ten.

The number of ordinary Exhibitioners it shall be lawful to elect in each year shall be three, unless the number on the foundation for the time being would be thereby increased beyond the greatest number for the time being permitted by this agreement, in which case not more than two shall be elected.

By a subsequent agreement of date 21st January, 1886, the following modifications were made :—

1. The value of the Snell Exhibitions shall be reduced to £80 a year.

2. They shall be held, as heretofore, for five years, but the whole sum of £400 will be paid to each Exhibitioner during the first three years of his tenure in equal annual sums, but a moiety of the last annual payment shall be kept back, if the authorities of Balliol College think fit, until the Exhibitioner shall have taken his Degree.<sup>1</sup>

Candidates must have been born in Scotland, or must be sons of fathers born in Scotland, and must "have resided<sup>2</sup> as Under-graduate Students for two years at least in Glasgow College, or for one year in that College and two at least in some other College in Scotland." "No candidate shall be admitted to examination who shall be a member of the University of Oxford of more than one year's standing from the day of his matriculation inclusive; and no candidate shall be admitted to examination more than once after he shall have completed his 23rd year; but a candidate otherwise qualified shall not be excluded from examination on the ground that he is a graduate of any Scotch University."

Candidates are expected to inscribe their names in a book kept at the Clerk of Senate's Office for the purpose, not later than 1st November, 1907. The next examination will be held in December, 1907, on days and hours to be fixed hereafter.

<sup>1</sup> Further modifications are in contemplation.

<sup>2</sup> By Resolution of date December 13th, 1860, the Senate determined that "Residence" shall, for the purpose of the Snell Trust, be constituted by regular attendance as a public student for the complete winter session on not less than two of the classes in the curriculum for the Degree of Arts.

The subjects of examination are as follows :

IN LATIN, GREEK, LOGIC, MORAL PHILOSOPHY, AND HISTORY.—The subjects of examination for the Degree of M.A. with Honours.

IN NATURAL PHILOSOPHY AND MATHEMATICS.—The subjects of examination for the Ordinary Degree of M.A., and higher subjects which any candidate may express a wish to be examined in.

Candidates are requested to take notice that they are not required to attend the examination in more than one of the four groups, viz.: Classics, Mental Philosophy, Mathematics and Natural Philosophy, and History; that a candidate may be appointed for decided excellence in any one department alone; and if such excellence in some one of the departments be not displayed by three of the candidates, the Senate will either appoint a candidate who has shown sufficient proficiency in several departments, or will abstain from making any appointment. All candidates, however, will be required to write an English Essay on a subject prescribed at the time. Candidates who do not offer Classics will be required to show such a knowledge of Latin and Greek as to prove their ability to pass Responsions at Oxford.

*Exhibitioners*—Charles G. Nelson, 1903; William J. Auld, 1904; John R. Brown, 1905; John H. Maxwell, 1906; Robert Gibson, 1907.

THOMSON EXPERIMENTAL SCHOLARSHIPS.—Three Scholarships, in value about £20 each, for the promotion of Experimental Research, founded by Sir William Thomson (now Lord Kelvin), LL.D., D.C.L., Professor of Natural Philosophy in the University, by letter to the Principal of date September 6th, 1869, in which, after referring to "the liberal and friendly spirit which had been shown him by his colleagues in respect to his connection with telegraphic enterprise," and the "facilities for experimenting which the College had afforded him," he states that "he wished to mark his sense of these benefits by setting aside something of what he had received to assist in promoting the cultivation of experimental investigation in Glasgow University," and for this purpose offered for the acceptance of the Senate the sum of £1,000.

The scholars are appointed by the Senate on the recommendation of the Professor of Natural Philosophy from among students who have previously shown their zeal and ability in Experimental Investigations in the Physical Laboratory, and they are required to engage in the continual prosecution of Experimental Investigations in the Laboratory for not less than nine months of the year, to the satisfaction of the Professor of Natural Philosophy. These Scholarships may be held along with any other Bursary, Scholarship, or Fellowship.

*Scholars for 1906-7*—Alexander Macdonald, 1906; Alfred I. Steven, 1906.

**JAMES WATT SCHOLARSHIP.**—In 1808, James Watt, L.L.D., presented the College with a perpetual annuity of £10, for the institution of a prize, to be awarded to the author of the best Essay on some subject in the following branches of study, to be taken in rotation:— 1. Any branch of Mechanics or its dependent Arts. 2. Statics, and the Machines and Arts dependent. 3. Pneumatics, Statical or Chemical, Machines and Arts. 4. Hydraulics, Hydrostatics, their Machines and Arts. 5. Chemistry, its Arts and Apparatus. All actual students who had completed, or who, at the end of the session in which the Prize fell to be awarded, should have completed a regular course of study in Languages and Philosophy, might be competitors. By Ordinance No. 93 of the Universities Commission (1889), issued on 15th February, 1895, and approved by Her Majesty in Council on 13th August, 1895, it was provided that the Watt Prize should be discontinued, that the funds should be allowed to accumulate for four years from the date of the Ordinance, and that thereafter a James Watt Scholarship in Engineering should be established.

The Scholarship is awarded by the Senate, on a special report by the Faculty of Science, to a Bachelor of Science of distinction of not more than two years' standing. It is tenable for two years, and the James Watt Scholar is required to pursue during his tenure special higher studies in the Engineering Laboratory, under the direction and to the satisfaction of the Professor.

*Scholar*—George Pate, B.Sc., 1906.

**WILLIAM MEIKLEJOHN BURSARY (Arts).**—Founded in 1889 by the Trustees of the late Mrs. Mary Dougall or Meiklejohn, who died on 8th April, 1888, and left £600 for that purpose. The Bursary is of the annual value of £20, and tenable for four years in the Arts Classes of any Scottish University by a student who is prosecuting his studies with the view of becoming a Minister of the Church of Scotland. The Patrons are the Ministers and Elders of the Kirk-Session of the Parish of Stirling. The Bursary is open to candidates who have received the whole or part of their past education at the High School of Stirling, whom failing to natives of Stirlingshire. Application to be made to Mr. James Brown, Solicitor, 10 Barnton Street, Stirling.

## 3.—PRIZES.

Besides the class Prizes, and a number of Prizes given by the different Professors for particular kinds of merit, there are others which the generosity of public-spirited individuals has founded for the encouragement of learning in the University.

The names of the Prizemen for Session 1906-1907 will be found in the Degree and Prize List.

## INDEX.

FOUNDATION.	NATURE OF PRIZE.	AWARDED FOR
Arnott, - - - - -	£25 and £15,	Examinations.
Brunton Memorial, -	£10,	Do.
Buchanan (3), - - -	Books,	Do.
Burnet, Lindsay, - -	Silver Medal.	Research.
Cleland, - - - - -	Gold Medal.	Examinations.
Cleland & Rae Wilson,	Four Gold Medals.	Do.
Cobden, - - - - -	£20 and Silver Medal (triennial),	Essay.
Coulter, - - - - -	Two at £5 each,	Essays.
Cowan, - - - - -	Three Gold Medals,	Examinations.
Cunninghame, - - -	Gold Medal,	Do.
Dickson Prize, - - -	Books,	Do.
Dobbie-Smith, - - -	Gold Medal (biennial),	Essay.
Dowanhill, - - - -	£20 and £10,	Elocution.
Ewing, - - - - -	Gold Medal (biennial),	Essay.
Findlater, - - - - -	£38,	Examination.
Gartmore, - - - - -	Gold Medal (biennial),	Essay.
Gladstone Historical, -	£21 (biennial),	Examination.
Gladstone Memorial, -	£5 in Books.	Do.
Harvey, George, - - -	£14,	Do.
Henderson, - - - - -	£21,	Essay.
Jamieson, - - - - -	£10,	Examination.
Jeffrey, - - - - -	Gold Medal,	Do.
Kirk Memorial, - - -	£14,	Do.
Logan, Thos., Memorial,	Gold Medal and £12,	Do.
Luke Historical, - - -	£9 (biennial),	Do.
Macfarlan and Cook, -	£21,	Do.
Macleod, - - - - -	Gold Medal,	Do.
Muirhead, - - - - -	Books,	Do.
Muirhead, G. Roger, -	£2 5s.,	Do.
Nichol Memorial, - - -	Books,	Do.
Reid, John, - - - - -	£25,	Original Research.
Ross, Robert (2), - - -	Med., books, or money,	Examinations.
Scott-Macfarlan, - - -	Gold Medal,	Examination.
University, - - - - -	Silver Medal,	Essay.
Walker (4), - - - - -	Books, etc.,	Examinations.
Watson, - - - - -	£50,	Examination.

ARNOTT PRIZES.—Founded in 1869, by Dr. Neil Arnott of London, who presented to the Senate the sum of £1,000 to found a Prize, or Prizes, for the encouragement of the study of Natural Philosophy among the Medical students of the University.

By resolution of the Senate of date April 10, 1873, the following regulations were adopted :—

1. That there shall be two separate examinations—one in General Physics, for students of the first and second years of their Medical studies ; the other for students of the third and fourth years, in Physiological Physics, or the application of the doctrine of General Physics to Physiological Science.

2. The knowledge required for the second of these examinations being much more extensive, and of a much higher order than that required for the first, and being the kind of knowledge of which it is most important to encourage the cultivation, as not only useful in the practice of the Medical Art, but eminently fitted to advance the Physiological Sciences ; that a sum of not less than Twenty-five pounds be offered annually, in one or several sums, as circumstances may require, to the student or students who excel in the second examination.

3. That the remaining portion of the revenue derived annually from Dr. Arnott's donation be offered in the same way to the student or students who excel in the first examination.

4. That the first examination be under the superintendence of the Faculty of Arts, with the Professors of Physiology and of Anatomy as Assessors.

5. That the second examination shall be under the superintendence of the Medical Faculty, with the Professors of Natural Philosophy and of Mathematics as Assessors.

6. That all candidates shall, at the commencement of each session, intimate their intention to the Assistant Clerk (Matriculation Office) ; and that, to prevent unqualified persons from coming forward, each candidate shall produce satisfactory evidence of his having attended a Course of Lectures on Natural Philosophy, or of having been a pupil in a Laboratory where Practical Physics or Practical Physiology is taught ; or, failing of these qualifications, he shall deposit the sum of ten shillings, which shall be forfeited if his examination marks fall below the average standard.

7. That every candidate who passes creditably the first examination shall be thereby entitled to come forward for the second, without being obliged to deposit the sum of ten shillings.

8. That no prize shall be awarded without sufficient merit being shown, and that in the event of one or more of the prizes on any occasion not being awarded, the amount shall be added to the principal sum.

The examination will be in writing, and will be held on Friday, the 4th October, 1907, in the Examination Hall, at 2 P.M. Intending candidates to give in their names to the Assistant Clerk (Matriculation Office) on or before 16th September.

**BRUNTON MEMORIAL PRIZE.**—Founded in 1879, in memory of the late Duncan M. Brunton, M.A., M.B., Paisley, a distinguished graduate of this University, who died on 16th November, 1876, of fever, contracted in the diligent discharge of his professional duties in the Royal Infirmary of Paisley. The Committee of Subscribers paid over to the Senate the sum of £300, the interest of which is to be given annually to the most distinguished graduate in Medicine of the year.

**BUCHANAN PRIZES.**—A Bursary was founded in 1866, in recognition of the eminent services of Robert Buchanan, LL.D., as Professor of Logic and Rhetoric in the University during the long period of forty years. The fund consists of a sum of £314 raised by subscription. The Buchanan Bursaries having been founded under the Will of Professor Buchanan, the proceeds of this fund are now, with the sanction of the subscribers, applied to the purchase of books, which are annually awarded to the most distinguished students in the classes of Logic, Moral Philosophy, and English Literature.

**LINDSAY BURNET SILVER MEDAL.**—In 1901 the relatives of Mr. Lindsay Burnet, Engineer in Glasgow, who died on 14th March, 1895, founded this Medal to his memory, and also as a memorial of the respect which he entertained for Archibald Barr, D.Sc., Professor of Civil Engineering and Mechanics, and for his work in the University. The following are the regulations:—

The Medal shall be awarded to a student in regular attendance at the University for a thesis descriptive of a research upon a subject connected with The Properties or the Utilisation of Fuel, The Generation or Properties of Steam, The Principles of Thermodynamics, or The Operation of Heat Engines.

The research shall be conducted by the candidate in the Engineering Laboratories of the University, but in exceptional cases investigations requiring the use of machines or apparatus not provided in the Laboratory may be conducted in part elsewhere under such conditions as may in each case be sanctioned by the Professor of Engineering.

The Professor of Engineering may sanction the employment of such assistance, if any, as he may in each case deem necessary for the efficient carrying out of the research, and shall regulate the use of apparatus belonging to the University as regards the time when it shall be at the disposal of the candidate and the manner in which it may be employed.

The Senate shall from time to time issue regulations regarding the standing of students who shall be eligible to compete for the Medal, the form which the theses shall take, the date on or before which the theses must be submitted, and other details.

All matriculated Engineering Students and all University or other Research Students may compete; any Thesis submitted must be a description of an experimental research conducted in accordance with the foregoing regulations, and must be sent to the Clerk of Senate not later than 12th October.

The Medal shall be awarded by the Senate after receiving a report from the Professor of Engineering and any assessor or assessors whom the Senate may have appointed to act with him.

The Senate may withhold the Medal in any year in which, in their opinion, no thesis of sufficient merit has been submitted.

The Professor of Engineering shall have the power to prescribe a particular subject or to limit the range of subjects upon which theses may be presented in any year; and, farther, with a view to avoiding any undue interference with other researches, or with the general routine work of the Laboratory, he shall have power to prescribe the particular subject or range of subjects with which any individual candidate may deal.

The theses shall become the property of the University, and may be preserved in the Engineering Departmental Library or elsewhere as the Senate may direct, and the Senate may grant to students or others access to the theses under such conditions as they may from time to time prescribe. At all reasonable times the candidate shall have access to his own thesis for reference.

All results obtained in researches conducted in competition shall be subject, as regards rights of publication, to the general conditions applicable to work done in the University by research students and to any special regulations that may be made relating to work conducted in the Engineering Laboratory.

Should any new Chair or Chairs in Engineering Science be instituted in the University, the Professor whose laboratory courses are, in the opinion of the Senate, most closely identified with the general application of thermodynamics to engineering practice shall be deemed to be the Professor of Engineering for the purposes of this foundation.

**CLELAND AND RAE WILSON GOLD MEDALS.**—Dr. James Cleland, Superintendent of Public Works in Glasgow, who died 14th October, 1840, founded a Gold Medal of the value of Ten Guineas, to be bestowed in alternate years on a student of Divinity, and a student of Natural Philosophy, as a prize for the best Essay on any subject to be prescribed by the Principal and Professors of the University.

Dr. William Rae Wilson of Kelvinbank, who died 2nd June, 1849, founded a Gold Medal to be bestowed upon the Divinity student who should produce the best Essay on the Life of Christ.

These foundations are now regulated by Ordinance No. 97 of the Universities Commission (1889). The Cleland Gold Medal, not

exceeding ten guineas in value, is awarded to the most distinguished student in the class of Natural Philosophy in each year. The remainder of the free income of the Cleland Foundation is added to the total free income of the Rae Wilson Foundation, to provide four Gold Medals of equal value. These medals are awarded in each year as follows:—One to the most distinguished student in each of the classes of (1) Divinity, (2) Ecclesiastical History, (3) Hebrew and Semitic Languages, and (4) Divinity and Biblical Criticism. In the event of there being no student of sufficient distinction in any of these classes, the proportion of the income for that year may be applied towards the promotion of theological study in such manner as the Senate may decide.

**COBDEN PRIZE.**—This prize of the value of £20, together with a silver medal, will be offered by the Cobden Club, London, every third year for an essay on some subject connected with political economy. The subject is to be fixed by the three adjudicators, two of whom are appointed by the University and the third by the donors. Members of the University of not more than six years' standing may be competitors. The prize will be awarded in 1906 and thereafter triennially.

**COULTER PRIZES.**—In 1787 Mr. James Coulter, merchant in Glasgow, bequeathed £200 to the University, "the annual proceeds to be applied in premiums, one or more, either pecuniary or honorary, for the encouragement of Composition and Elocution, upon subjects of the Faculty's choosing." The interest of this sum is now divided into Two Prizes of £5 each; the one to be given in alternate years for a Sermon or Theological Essay, and for an Essay on Mental Philosophy and English Literature, the other to be given annually for a translation from some Classical Author, or other composition connected with Classical Literature. The competition for these prizes is open to all matriculated students of the University.

**COWAN GOLD MEDALS.**—In 1836 Dr. Cowan of Sunderland presented to the University the sum of £400, the interest to be applied annually in the purchase of Two Gold Medals of the value of about £10 each, to be awarded to the two students who may distinguish themselves most in the Greek and Latin Examination upon the Blackstone; and shortly afterwards (1839) the same gentleman presented the University with an additional sum of £105, the interest to be expended annually in the purchase of a Gold Medal of the value of £5, to be awarded to the best student in the Humanity Class.

The examination for Dr. Cowan's Blackstone Medals will be held early in November, 1907. Competitors to be eligible must be public students in some curriculum class in the Faculty of Arts.

For the Greek Medal—1. A candidate must have received a Certificate in the Greek Class for session 1906-1907.



2. Every candidate will be required to answer a Preliminary Paper, consisting of unprepared passages for translation.

3. Two or more candidates, selected by this paper, will on a subsequent day be examined orally in the books which they offer.

4. Each selected candidate must offer for the Oral Examination (i.) one Verse Subject, (ii.) one Prose Subject. (i.) The Verse Subject must be *either* five books of Homer, *or* two Greek plays (tragedies or comedies). (ii.) The Prose Subject may be *any one* of the following :—(a) Herodotus—two books ; (b) Thucydides—two books ; (c) Plato—two dialogues, *or* two books of the *Republic* ; (d) Aristotle—two books of the *Ethics*, of the *Politics*, *or* of the *Rhetoric*.

5. Any member of the Greek Class for session 1907-8 is at liberty to go in for the Preliminary Paper, even though he is not a candidate for the Cowan Medal ; and if he acquits himself with distinction in that paper, his name will be mentioned when the award of the Medal is announced.

For the Latin Medal competitors must in the session preceding the competition have received a public ticket of the Latin Class.

Notice is hereby given, that at the examination for Dr. Cowan's Medals in November, 1892, and thereafter, no one will be admitted to compete for the Greek Cowan Medal who has attended for more than three sessions, or who, after passing the preliminary examination in Greek, has attended for more than two sessions in any Scottish University, and no one shall be admitted to compete for the Latin Cowan Medal who has attended for more than two sessions, or who, having been admitted to the Senior Class in consequence of having passed the preliminary examination in Latin, has attended for more than one session in any Scottish University.

**CUNNINGHAME GOLD MEDAL.**—In 1886 Mr. Andrew Cunningham, Town Clerk Depute of Glasgow, bequeathed to the University, *inter alia*, £350, free of legacy duty, with directions that the annual revenue thereof should be applied in purchasing a Gold Medal as a prize in the class of Mathematics.

**DICKSON PRIZE.**—In 1895, when the late Professor Dickson retired from the Chair of Divinity, his former students presented him with a testimonial consisting of silver plate and a cheque for £120. This sum was handed over by Dr. Dickson to the University Court, that the free annual income might be applied in the form of a prize of serviceable books to accompany the gold medal given to the most distinguished student of the year in the class of Divinity. In accordance with the wish of the subscribers the prize has been called the Dickson Prize.

**DOBBIE-SMITH GOLD MEDAL.**—In 1881 Mr. Thomas Smith, L.R.C.S.E., Heriot Hill House, Edinburgh, presented to the University, in memory of his wife, lately deceased, the sum of £150 for the

purpose of founding a University Gold Medal of about £10 in value, to be given biennially for the encouragement of the study of Botany. The competition is open to all Matriculated Students of the session in which the Medal is to be awarded; the subject of competition—which shall always be a Botanical subject—to be selected by the Professors of Botany and Natural History, and announced at least eighteen months before the date fixed for receiving essays. (See page 442.)

**DOWANHILL PRIZES.**—Two prizes, one of £20, and the other of £10, for "Excellence in the Art of Oratory and Declamation, and in the practice of a refined and pleasing Delivery, and in reading the Scriptures," founded in 1865 by Mr. John Buchanan, merchant in Glasgow, as sole Trustee, nominated and appointed by his deceased brother, Mr. Thomas Buchanan, also merchant in Glasgow, and in order to carry out the intentions of his said brother. These prizes are awarded annually to Students of Divinity, at the termination of the third or fourth session of their attendance on the Hall, by the votes of their fellow-students. Competitors must have attended for two sessions an Elocution Class, taught by a master approved by the Senate.<sup>1</sup>

The above foundation is in memory of the late Mr. James Buchanan of Dowanhill, of Ellison MacCallum, his wife, and of Mr. George Buchanan of Stanley, Perthshire, the Father, Mother, and elder Brother of the Founder.

**EWING GOLD MEDAL.**—In 1828 James Ewing, LL.D., of Levenside, presented the University with £100 for a Gold Medal to be given every second year for the best essay on an historical subject. The Gartmore and Ewing Medals are to be given alternately.

**FINDLATER (DIVINITY) SCHOLARSHIP OR PRIZE.**—This Scholarship, consisting of the free annual proceeds of the sum of £1,000 gifted to the Senate by Mr. Alexander Findlater, Dublin, was founded in 1871. The following regulations have been adopted by the Senate:—

1. The Findlater Scholarship shall be awarded annually by competition.

2. At the competition in April, 1908, and thereafter biennially, the examination shall be in Divinity (Biblical and Systematic Theology), Church History, and Biblical Criticism; at the competition in November, 1908, and thereafter biennially, the examination shall be in Hebrew, New Testament Exegesis, and Apologetics.

3. The subjects of examination in each of the departments shall be the same as those prescribed for the Degree of B.D.

4. The examination shall be held at the same time as the examination for the Degree of B.D.

<sup>1</sup> See note under Faculty of Theology, *supra*.

5. The competition shall be open to all students of Divinity in this University who shall complete the ordinary course at the close of the session in which the examination is held, or who shall have completed their course at the close of the session immediately preceding.

6. No candidate who has gained the Scholarship at one examination shall be at liberty to compete for it a second time.

The next competition will take place in April, 1908. Names of Candidates to be given in to the Assistant Clerk (Matriculation Office) on or before 27th March, 1908.

**GARTMORE GOLD MEDAL.**—In 1788 Mr. Robert Graham of Gartmore presented the University with £100 for the institution of a Prize for the best essay on any subject intimately connected with the nature, foundation, advantages, and support of political liberty. This Prize—a Gold Medal—is open to the competition of all students of the University, and is given biennially. The founder directed that the surpluses should be accumulated till a capital was formed sufficient to found a Bursary.—See Gartmore Bursary, p. 340.

**GLADSTONE HISTORICAL PRIZE.**—Founded in 1880 by the Gladstone Club, in commemoration of the election in 1877 of the Right Honourable William Ewart Gladstone, M.P., as Lord Rector of Glasgow University, and in recognition of his distinguished career as a scholar, author, statesman, and orator. The following are the regulations :—

1. The prize shall be given for the best examination in English History.

2. The examination shall be held biennially.

3. The value of the Prize shall be Twenty Guineas.

4. The competition shall be open to Graduates of Glasgow University of not more than two years' standing from the date of their first graduation. The next competition will take place in January, 1908. Names of competitors to be given in to the Assistant Clerk (Matriculation Office) not later than 1st December, 1907.

**GLADSTONE MEMORIAL PRIZE.**—In November, 1899, the Committee of the Gladstone Memorial Fund resolved to devote the revenue accruing from the surplus of the Fund to the establishment of Gladstone Memorial Prizes to be given in Books at the Universities of Oxford, Cambridge, and London, at the Scottish Universities, and the University Colleges in Great Britain, for special proficiency in History, Political Science, and Economics. In this University the prize, in value Five Pounds, will be awarded annually. Either graduates of this University who have taken the degree of M.A. with Honours, or students presenting themselves for examination for the Degree of M.A. with Honours in Economic Science, may be candidates ; but no student shall be eligible after the expiration of

more than six winter sessions from the time of his or her first entering a class qualifying for the Degree of M.A., and no student who has once obtained the prize may compete a second time. The subjects of examination shall be the same as those prescribed for Honours in Economic Science, and the examination shall be held at the same time as the autumn examination for Degrees with Honours in Economic Science. The Prize is awarded by the Senate on the report of the Examiners for Degrees, and it is competent for the Senate to award it to the holder of a Fellowship, or Scholarship, or Bursary. The Prize will be open to competition in October, 1907.

**GEORGE HARVEY PRIZE.**—Founded in 1874, by the liberality of a donor who has withheld his name, in memory of the late Mr. George Harvey of No. 9 Park Quadrant, Glasgow. Present annual value £14, which is given as a prize in the class of Civil Engineering, to the student who shows, during the session, the greatest proficiency in the department of applied Mechanics and Shipbuilding. Any accumulation of surplus income to be given as a second prize of £5 or £10 in the same department.

**HENDERSON PRIZE.**—In 1850 Mr. John Henderson of Park, merchant in Glasgow, instituted an annual prize of the value of £21 sterling, to be called the "Henderson Prize," for the best Essay on some subject relating to the Divine Authority and Practical Value and Influence of the Sabbath. The Universities Commission (1889), by Ordinance No. 101, altered the conditions and directions affecting this prize. It is now to be awarded for the best essay on a subject to be fixed by the Faculty of Divinity, provided always that in every third year at least, the subject shall relate to the Divine authority and practical value and influence of the Sabbath. The competition is to be open to Masters of Arts of not more than five years' standing, as well as to matriculated students of the University.

**PRIZE IN ITALIAN.**—A prize of £15 will be awarded each year, during the pleasure of the donors, for the best essay on Italian Literature, handed in on or before the 15th February.

The choice of the subject is free.

The essay may be written in English or in Italian.

Essays written in English will not receive more than 90 marks, the maximum of marks being 100.

Essays written in Italian with grammatical mistakes will not be considered.

This prize is instituted to encourage higher culture rather than the mechanical acquirement of one more language. It will therefore be open only to students or graduates of the Glasgow University who have attended or are attending honours classes in Classics, or at least in English or French Literature.

The award will be made by Giovanni Pascoli, of the University of Bologna, Professor Phillimore, and the lecturer on Italian of the Glasgow University.

Valuable books will also be presented by Giovanni Pascoli to the writer of the best essay.

The result will be known by the 15th of March.

It is hoped that the institution of this prize may lead to a further development of the same kind in connection with the University summer vacation courses, which will begin in Florence in 1907 or 1908.

**JAMIESON PRIZE.**—In 1854 a subscription list was opened for the foundation of a prize or scholarship in Divinity, but the commercial difficulties of the following years prevented the purpose of the promoters being carried out at the time. In 1881 the sum subscribed, amounting, with accumulated interest, to £319 6s. 4d., was handed over to the University, and the Senate resolved to connect it with the name of the Convener of the Committee of subscribers, the Rev. Robert Jamieson, D.D., formerly minister of St. Paul's Church, Glasgow.

The following regulations have been adopted by the Senate :—

1. The Jamieson Prize shall be awarded annually by competition.
2. At the competition in November, 1907, and thereafter biennially, the examination shall be in Hebrew, New Testament Exegesis, and Apologetics ; at the competition in April, 1909, and thereafter biennially, the examination shall be in Divinity (Biblical and Systematic Theology), Church History, and Biblical Criticism.
3. The subjects of examination in each of the departments shall be the same as those prescribed for the Degree of B.D.
4. The examination shall be held at the same time as the examination for the Degree of B.D.
5. The competition shall be open to all students of Divinity in this University who shall complete the ordinary course at the close of the session in which the examination is held, or who shall have completed their course at the close of the session immediately preceding.

6. No candidate who has gained the Prize at one examination shall be at liberty to compete for it a second time.

The next competition will take place in November, 1907. Names of candidates to be given in to the Assistant Clerk (Matriculation Office) on or before 16th October, 1907.

**JEFFREY GOLD MEDAL.**—Mr. Francis Jeffrey, advocate (afterwards Lord Jeffrey), on his re-election as Lord Rector of this University, in 1821, gave a prize of a Gold Medal and continued to do so annually.

In 1849 Lord Jeffrey presented the University with the sum of £120 for a Gold Medal to be awarded each session to the most distinguished student of the Greek Class.

**KIRK MEMORIAL PRIZE.**—A sum of £402 was collected in 1893 by various friends of the late Alexander Carnegie Kirk, LL.D., formerly President of the Institution of Engineers and Shipbuilders in Scotland, for the purpose of founding a prize in his name, in connection with the Naval Architecture Class in the University. The free annual income of the foundation is awarded annually as a prize. The competition is open to students who have, in the session of competition, attended the Senior Class of Naval Architecture, and who are completing the Final Science Examination under Ordinance No. 23, Glasgow No. 2, embracing (a) Naval Architecture with Marine Engineering, and (b) Practical Work in Ship and Marine Engineering Drawing, the award being determined by the proficiency shown in (a) and (b). Should two or more candidates be reported equal, the Senate may divide the Prize, or prescribe a further examination. The subscribers have given the Senate power to convert this Prize into a Bursary, should it be found expedient or advantageous to do so at any future time.

**THOMAS LOGAN MEMORIAL MEDAL AND PRIZE.**—Mr. David Logan, fruiterer, Glasgow, who died on 19th May, 1886, directed his trustees to pay to the Senate the sum of £500, free of legacy duty, to found a Gold Medal and Prize in memory of his brother, Thomas Logan. The Medal is of the value of £5, and the Prize consists of the balance of the annual proceeds given in money. They are awarded annually in April to the graduate in Arts of the preceding year who obtained the highest marks in the Degree Examinations.

**LUKE HISTORICAL PRIZE.**—A sum of £150 was collected in 1863 by various friends of the late Mr. George Rankin Luke, in Oxford and Scotland, for the purpose of founding a prize in his name, in connection with the University of Glasgow, where he studied during two years of his brilliant career as a scholar.

The Senate, with the sanction of the promoters of this fund, resolved to employ it to found a biennial Prize, for excelling in a competitive examination on general subjects connected with Ancient History and Literature. The examination to be conducted either altogether in writing, or by combination of writing and *vivâ voce* questions; and the determination to rest with the Professors of Humanity and Greek, in conjunction, in case of uncertainty, with any one of their colleagues whom they may desire to nominate.

The Prize on the above foundation is given to the student who acquires himself best in an examination in Ancient Greek and Roman History.

The next competition will be held in January, 1909. In addition to historical questions, original passages will be given for translation from the standard authors. The competition is open to all students who shall have attended during session 1907-8 any Greek or Latin Class.

Names of Candidates to be given in to the Assistant Clerk (Matriculation Office) on 1st December, 1908.

**MACFARLAN AND COOK TESTIMONIAL PRIZE.**—The Macfarlan and Cook Testimonial Prize of Twenty Guineas, instituted in 1847 (along with a similar Prize in the University of St. Andrews), by the friends of the late Principal Macfarlan, D.D. of this University, and Professor George Cook, D.D. of St. Andrews, as a memorial of the services rendered to the Church of Scotland by these eminent clergymen, is bestowed annually on the Theological Student, of three years' standing, who shall pass the best examination in Greek, Moral Philosophy, Hebrew, Ecclesiastical History, and Divinity.

**MACLEOD MEDAL.**—In 1895 Lady Macleod instituted this Gold Medal in memory of her husband, Sir George Husband Baird Macleod, M.D., LL.D., Regius Professor of Surgery in this University from 1869 to 1892. The competition is open only to those who have attended the classes of Systematic and Operative Surgery taught by the Regius Professor of Surgery in the University, and women students are not eligible. The Medal is awarded yearly to the student who most distinguishes himself in the work (written, oral, and practical) of these classes.

**MUIRHEAD PRIZES.**—In 1776 Messrs. John Muirhead of Teggetsheugh, and Peter Muirhead, minister of Dysart, brothers of the deceased Mr. George Muirhead, Professor of Humanity in Glasgow College, presented a donation of £100, the interest to be applied in purchase of books to be awarded as prizes to those students attending the Humanity Class who shall be thought most deserving.

**GEORGE ROGER MUIRHEAD PRIZE.**—In 1896 a sum of £100 was bequeathed to the University by Mrs. Elizabeth Lockhart Roger or Muirhead, Glasgow, to found a prize in the Chemistry class in memory of her son, George Roger Muirhead, who studied Chemistry in this University. The free annual income is paid annually to the medallist of the Chemistry class for the year.

**NICHOL MEMORIAL PRIZE.**—In 1895 the late Mrs. Jack presented the University with the sum of £150 for the purpose of founding a prize, to be called the "Nichol Memorial Prize," in memory of her brother, John Nichol, LL.D., Professor of English Language and Literature in this University from 1862 till 1889, who died in London on 11th October, 1894, and especially in commemoration of the active interest which he took in the teaching of English Litera-

ture to women in Glasgow and elsewhere. The free income of the fund is applied annually to providing a first prize for the English Literature Class in Queen Margaret College.

ORIENTAL SOCIETY'S ARABIC PRIZE. On 25th October, 1905, the Glasgow University Oriental Society resolved to give in books for the five academic years beginning 1st October, 1905, an annual prize of Three Guineas to the best student or students in Arabic.

RAE WILSON GOLD MEDAL.—(See Cleland and Rae Wilson, p. 417.)

RAMSAY MEMORIAL GOLD MEDAL.—This Medal, of the value of £10, was founded in March, 1907, by Emeritus-Professor George Gilbert Ramsay in memory of his uncle, William Ramsay, who was Professor of Humanity in this University from 1831 to 1863. The following are the conditions laid down by the founder, viz.:—The Medal shall be given yearly to the best Student in the Honours Humanity Class, without reference to whether he or she be attending that class for the first or any subsequent year, provided only that he or she have attended regularly throughout the Session, and gone through all the work and examinations of the class, and shall be awarded on the same principle as that on which The Muirhead Prizes have hitherto been awarded, viz.:—"To the Student or Students who have passed the best examination in the Prelections delivered and the subjects read in the Honours Class during the Session"; inclusive, however, of any examinations in unseen work or exercises which may form part of the regular work of the class, but exclusive of any exercises or essays done out of the class or at home. The particular arrangements for the examinations to be determined by the Professor of Humanity for the time being, subject to the approval of the Senate.

The above conditions may be revised by the Senate, if altered circumstances so require, provided that their general spirit be not departed from.

JOHN REID PRIZE.—A Prize of the value of £25 was founded in 1882 by Miss Mary Reid, Renfrew Street, Glasgow, in memory of her brother, the late Mr. John Reid, surgeon, 150 Renfrew Street, Glasgow. The prize will be awarded for the best original research conducted in one of the Hospitals or Scientific Laboratories in Glasgow, bearing on any department of Medical Science. The competition is open to registered students of medicine of not less than two years' standing; and to qualified medical men of not more than two years' standing, who (1) are still attached as *bonâ fide* students to one of the Glasgow Medical Schools, who (2) are not engaged in practice, and who (3) undertake to give up the prize if they enter on practice while holding it. All candidates are required to produce evidence of having attended a regular course of instruction, in one of the medical schools of Glasgow, on four of the following



subjects :—Medicine, Clinical Medicine, Surgery, Clinical Surgery, Materia Medica, Physiology, Pathology—such course of instruction having been received, in whole or in part, within three years of competing for the prize. The prize may be awarded for one, two, or three years, according to the value of the work done.

Further information may be obtained from Mr. John Hurl, jun., writer, 157 St. Vincent Street, Glasgow.

**ROBERT ROSS PRIZE.**—The late Robert Ross, Esq., writer, Glasgow, by his Will, dated 1880, bequeathed to the Dean and Council of the Faculty of Procurators, Glasgow, the sum of £500, to be held by them in trust, "to the end that the free annual income thereof shall be applied as an annual prize in the form of a medal, of books, or of money, as the Dean and Council may determine, to a student in each of the Scots Law Class and the Conveyancing Class of the University of Glasgow in equal proportions, such prize to be awarded for eminence displayed, either in the general business of the class or in any other manner in which the said Dean and Council may prescribe."

**SCOTT-MACFARLAN GOLD MEDAL.**—Founded in 1870 by Miss Scott, daughter of the late Rev. Robert Allan Scott, Vicar of Crauwell, Lincolnshire, in fulfilment of her father's intentions.

Mr. Scott, wishing to encourage the study of Greek in the University of Glasgow, of which he was an alumnus, and from which he obtained an Exhibition to Balliol College, Oxford, in 1825, dedicated to that purpose the sum of £100 for a Gold Medal, to be called the "Scott-Macfarlan Prize for Greek," in memory of Mr. Scott's kinsman, the late Principal Macfarlan, and to be given on the last day of the session in each year to the best scholar in Greek of the session; the medal to be adjudged by the votes of the students of the upper Greek class. As the Jeffrey Medal has long been given to the best student in the senior Greek Class, the "Scott-Macfarlan" Medal is awarded to the best student attending the Honours Greek Class for the first time.

**UNIVERSITY MEDAL.**—The University bestows annually a Silver Medal for an Essay in Mental Philosophy.

**WALKER PRIZES.**—Four Prizes (consisting of Books or Instruments) to be competed for each year by students of Civil Engineering and Mechanics, founded in 1857 and 1861 by James Walker, Esq., Civil Engineer, LL.D., F.R.S.S.L. and E.

The competition is open to all persons who shall have duly entered themselves as attending the class of Civil Engineering and Mechanics during the current session.

The competitors are examined orally and in writing; and two of the prizes are awarded on the results of the written examinations; the other two by votes of the class.

**WATSON HISTORICAL PRIZE.**—This Prize was founded in January, 1905, by Mr. Robert William Seton-Watson, in memory of his father, William Livingstone Watson, of Ayton and Balmanno, who died on 19th May, 1903. The following are the conditions laid down by the donor, viz.:—

1. The Prize shall be called the Watson Historical Prize, and its object is to encourage the study of History and Foreign Languages.

2. The prize shall be offered from time to time in money, and shall never be of the value of less than £50. It shall be offered as soon after that sum is available out of the income of the investment as shall seem advisable to the Senate.

3. The prize shall be adjudged by the Examiners in the Honours Group of History.

4. The prize shall be awarded to the student who shall be adjudged to have passed highest in the examination in the Honours Group of History, provided that the candidate shall have reached the standard of a First Class in that examination.

5. Should the prize not be awarded in any year in which it is offered, the sum available shall be added to the capital sum.

6. The successful candidate shall be bound to spend not less than three months on the continent of Europe in studying a foreign language or in carrying out research in foreign archives—in either case to the satisfaction of the Professor of History; and he shall pledge himself to avoid, so far as is in his power, hotels, pensions, and other places where English is spoken.

7. The prize shall be paid in two instalments, viz., at first £35 when the successful candidate sets out for the Continent, and after the lapse of two months the balance—in each case on the certificate of the Professor of History.

8. The Donor reserves the right, under advice from the Professor of History or the University Court, to readjust the conditions attached, with a view to effect any improvements which may be suggested by experience.

### *LIST OF BURSARIES, &c., OPEN TO COMPETITION DURING SESSION 1907-8.*

#### A.—FACULTY OF ARTS.

##### 1.—BURSARIES.

The following is a summary of the principal provisions of Ordinance No. 57<sup>1</sup> of the Universities Commission (1889) relating to the Bursary competition:—

The subjects of the examination for open Bursaries in Arts of the first year shall be the subjects prescribed for the Arts Preliminary,

<sup>1</sup> The full text of this ordinance is printed at pp. 312-316.

of which subjects candidates may select not more than five. Candidates who select Latin, Greek, or Mathematics, must take the papers of the higher standard in those subjects. In determining the marks to be assigned to the several subjects of examination, English, Latin, Greek, and Mathematics shall each have assigned to them double the marks assigned to any other subject, and no candidate shall be credited with marks in any subject in which he has not obtained such proportion of the total number of marks assigned to that subject as the Senate may from time to time prescribe.

Additional papers are set in

A. Latin, Greek, Mathematics.

B. French, German, Dynamics.

Of these additional papers candidates are allowed to take *either* two subjects from A., *or* one subject from A. and two from B., *or* three subjects from B.

No Candidate shall, except as hereinafter provided, obtain an open Bursary in Arts who shall not have passed the Preliminary Examination in Arts; provided that it shall be in the power of the Senate, with the approval of the University Court, to admit to an open Bursary in Arts a Candidate who shall have passed in at least three subjects of the Preliminary Examination, on the condition that he shall not retain the Bursary unless he shall have passed in all the subjects not later than the second Preliminary Examination after the date of his admission as Bursar. [This power lapsed in May, 1902.]

No student who has during a winter or summer session attended in any Scottish University any class qualifying in his case for graduation in Arts or Science, shall be eligible to compete for Bursaries of the first year in Arts or Science.

Candidates for Bursaries in Arts which are not awarded by open competition shall present themselves for the Preliminary Examination in Arts, and no Bursary shall, except as hereinafter provided, be awarded to any Candidate who shall not have passed the Preliminary Examination in Arts: provided that it shall be in the power of the Senate, with the approval of the University Court, to admit to a Bursary in Arts not awarded by open competition a Candidate who shall have passed in at least one subject of the Preliminary Examination, on the condition that he shall not retain the Bursary unless he shall have passed in all the subjects not later than the Second Preliminary Examination after the date of his admission as Bursar.

*N.B.*—For the Bursaries open to women students see pp. 316-319.

## FOR STUDENTS ENTERING THE FIRST SESSION IN ARTS.

I. FOR SPECIAL DISTINCTION IN PARTICULAR SUBJECTS.<sup>1</sup>

The Bursaries for special distinction are limited to Students of the first year who have passed the Arts Preliminary, and who have not gained a Bursary for general excellence.

1. *Forfar Bursary*, for special distinction in Classics (Latin and Greek), annual value £36, tenable for four years.

2. *Stewart Bursary*, for special distinction in English, annual value £15, tenable for four years.

3. *McGrouther Bursary*, for special distinction in Mathematics, annual value £20, tenable for four years.

4. *John Clark (Mile-End) Bursary*, for special distinction in French, annual value £30, tenable for four years, for Protestant students, sons or daughters of Protestant parents.

5. *John Clark Mile-End Bursary*, for special distinction in German, annual value £30, tenable for four years, for Protestant students, sons or daughters of Protestant parents.

6. *William Gardiner Bursary*, for special distinction in French and German, annual value £14, tenable for two years, with a preference, *ceteris paribus*, for sons of medical men, lawyers, and teachers.

7. *Buchanan Bursary*, for special distinction in Dynamics, annual value £13, tenable for three years.

## II. FOR GENERAL EXCELLENCE.

8. *General Council Bursary*, annual value £20, tenable for three years—open.

9. *George Grant, Jun., Bursary*, annual value £38, tenable for four years—open.

10. *Scott Bursary*, annual value £25, tenable for four years—open.

11, 12, 13, and 14. *Four John Clark (Mile-End) Bursaries*, annual value £30 each, tenable for four years, for Protestant students, sons or daughters of Protestant parents.

15, 16, and 17. *Three Biggart Memorial Bursaries*, annual value £25, tenable for four years, for students preparing for the Ministry of the United Free Church.

18. *Brand Bursary*, annual value £27, tenable for four years, for students preparing for the Ministry of the United Free Church.

19. *Cowan Bursary*, value for each of first two years £30, and for third year £20, for students who have attended Ayr Academy for at least two years before the date of examination. Apply to Mr. John Douglas, Wellington Chambers, Ayr, before the first day of September.

20. *Denny Bursary*, annual value £30, tenable for four years, for students from Dumbarton Burgh Academy. [Tenable in any Faculty.]

21. *Duncan's Bute Bursary*, annual value £35, tenable for four years, for natives of Bute.

<sup>1</sup> For Andrew and Bethia Stewart Bursaries, see p. 380.

22. *James Ewing Entrance Bursary*, annual value £20, tenable for four years, for sons of Glasgow merchants. Apply to W. H. Hill, LL.D., Clerk to the Merchants' House, before the first day of September.

23 and 24. *Two Forrest Bursaries*, annual value £22, tenable for one or more years, for students from New Monkland, Slamannan, or Shotts. See page 337. Apply to Mr. G. B. Motherwell, Town Clerk, Airdrie, before the first day of September.

25. *Forrester Bursary*, annual value about £20, tenable for three years, for natives of Leecroft or Dunblane Parish. Apply to A. B. Barty, LL.B., Writer, Dunblane, before the first day of September.

26 and 27. *Two Fullarton of Overton Bursaries*, annual value £22 each, tenable for two years, for students under 25 years of age, from the district of Cunninghame, in Ayrshire. Subjects for Examination—Latin, Elementary Mathematics, and English.

28. *Hamilton Educational Trust Bursary*, annual value £20, tenable for three years, open to pupils attending public or State-aided schools in the Burgh and Parish of Hamilton. Apply to Mr. Patrick Keith, Writer, Hamilton, before the first day of September.

29. *Hannay Bursary*, annual value about £15, tenable for three years, for students preparing for the Ministry of any Evangelical Religious Denomination in Scotland. Apply to Mr. Robert Brodie, 77 St. Vincent Street, before the first day of September.

30 and 31. *Two Glasgow Highland Society's Bursaries*, annual value £20 each, tenable for four years, for students of Highland descent. Apply to Mr. Hugh Brown, C.A., 58 St. Vincent Street, on or before the fifteenth day of August.

32, 33, 34, and 35. *Four Hill Bursaries*, annual value of each £15, tenable for three years, for students from public or State-aided schools under Govan School Board. Apply to Mr. Richard D. Donaldson, 155 Bath Street, before the first day of September.

36, 37, and 38. *Three Glasgow City Educational Endowments Bursaries*, annual value £25 each, tenable for four years, for students from public or State-aided schools in Glasgow. Apply to Mr. W. H. Macdonald, Hutchesons' Buildings, Ingram Street, before the first day of September.

39, 40, 41, 42, and 43. *Five Hutchesons' Educational Trust Bursaries*, annual value £20 each, tenable for four years, for students who have attended for at least two years immediately preceding the competition, and completed the curriculum in the secondary department of Hutchesons' Grammar School. Apply to Mr. W. H. Macdonald, Hutchesons' Buildings, Ingram Street, before the first day of September.

44 and 45. *Two James Laing Bursaries*, annual value £25 each, tenable for four years, for students of either sex who have been educated for at least three years in a school or schools in Stirlingshire. Apply to Mr. William Jenkins, Writer, Denny, before the first day of September.

46. *Leighton Bursary*, annual value £18, tenable for three years. Apply to the Town Clerk, City Chambers, before the first day of September.

47. *Lochhead and Mitchell Bursary*, annual value £33, tenable for four years. Preference to students of the name of Mitchell or Lochhead, whose parents are members of the Established Church of Scotland.

48. *M'Crie Bursary*, annual value £25, tenable for four years, subject to the conditions noted at p. 358. Apply to P. A. Thomson, Esq., Town Clerk, Ayr, before the first day of September.

49, 50, 51, and 52. *Four Marshall Trust Bursaries*, annual value £30 each, tenable for five years, for students of either sex from public or State-aided schools in Lanarkshire or Stirlingshire. Apply to William Mitchell, LL.D., 134 Wellington Street, Glasgow, before the first day of September.

53. *Patrick Bursary*, annual value £32, tenable for four years, for students from Renfrewshire.

54. *Pollock Bursary*, annual value £37, tenable for three years. Preference to candidates educated in Paisley.

55 and 56. *Two Pratt Bursaries*, annual value £20 each, tenable for four years, for students from the parishes of Wiston, Robertson, or Lamington. Apply to Messrs. Fyfe, MacLean & Co., 115 St. Vincent Street, before the first day of September. [Tenable in any Faculty.]

57. *William Whyte Bursary*, annual value £25, tenable for four years, open to students who have attended and completed the curriculum in the secondary department of Hutchesons' Grammar School. Apply to Messrs. Hill & Hoggan, 194 Ingram Street, on or before the first day of September. [Tenable also in Law or Medicine.]

58, 59, and 60. *Three James A. Paterson Bursaries*, annual value £30, £20, and £10 respectively, tenable for three years, for students preparing for the Ministry of the United Free Church. The subjects of examination are Greek and Hebrew, as detailed at page 373.

61. *James Paterson Bursary*, annual value £20, tenable for three years. The subjects of examination are Latin, Greek, Hebrew, and Logic, as detailed at page 372.

#### FOR STUDENTS ENTERING THE SECOND SESSION IN ARTS.

Nos. 10, 18, 21, 26, 27, 44, 45, 58, 59, 60, 61, in the preceding list.

62. *Park General Council*, annual value £20, tenable for two years—open.

63. *Lorimer Bursary*, annual value £24, tenable for three years. The examination will take place along with the Arts Preliminary Examination in Mathematics, but may embrace higher papers.

64a. *Lorimer Bursary*, annual value £24, tenable for three years. Subjects of examination—1. *Logic*: (a) Descartes, *Meditations* (Veitch's translation); (b) Ferrier, *Lectures on Greek Philosophy*, the Pre-Socratic period. 2. *English Literature*: (a) Shakespeare's *Coriolanus*, *The Tempest*; (b) Pope, *Essay on Criticism*, *Essay on Man*; (c) Burke, *Speech on Conciliation with America*.

64*b*. *John Ferguson Jaffrey Bursary*, annual value £34, tenable for two years. The subjects of examination are the same as for the Lorimer Bursary, No. 64*a*.

FOR STUDENTS IN ARTS WITHOUT RESTRICTION TO A PARTICULAR SESSION.

65. *Monteith Bursary*, annual value about £14, tenable for three years. Open only to natives of Scotland and sons of Scottish parents. Examination in French.

66. *Muir Junior Bursary in Mathematics*, annual value £8, tenable for sessions 1908-9, 1909-10. The appointment will be determined by the results of the written examinations passed in the course of the session 1907-8 by the public students of the Ordinary Class of Mathematics.

67. *Muir Senior Bursary in Mathematics*, annual value £16, tenable for session 1908-9. The appointment will be determined by the results of the written examinations passed in the course of the session 1907-8 by the public students of the Intermediate Honours Mathematical Class.

68. *Lanfne Bursary in Mental Philosophy*, annual value £27, tenable for two years.

69. *Lanfne Bursary in Modern Languages*, annual value £27, tenable for two years.

70. *Lanfne Bursary in English*, annual value £27, tenable for two years.

71. *James Ferguson Bursary in Classics*, annual value £95, tenable for two years. Preference, *ceteris paribus*, to natives of Lesmahagow or Muirkirk, or Pictou, Nova Scotia, and also to students of the name Ferguson or Weir, or to the kin of the Founder. The examination is the same as that for Honours in Classics.

2.—FELLOWSHIPS, SCHOLARSHIPS, ETC.

72. *Armagh Bursary in Classics*, annual value £48, tenable for one year in Theology, Law, or Medicine. Open to students who are presenting themselves for the final examination for the degree of M.A. with Honours in Classics.

73. *William Euing Fellowship in Classics*, annual value £100, tenable for four years. Open to Glasgow Masters of Arts.

74 and 75. *Two Breadalbane Scholarships in Mathematics and Natural Philosophy*, annual value £55, tenable for three years. Open to Glasgow Masters of Arts or Bachelors of Science in Engineering Science, who have graduated within a period of not more than three years preceding the competition.

76. *George A. Clark Scholarship in Mathematics and Natural Philosophy*, annual value about £168, tenable for four years. Open to Glasgow Masters of Arts with Honours, or students presenting themselves for the M.A. degree with Honours in Mathematics and Natural

Philosophy, but no student shall be eligible for the examination after the expiration of more than eight winter sessions from the time of his first entering a class qualifying for the M.A. degree.

77. *Armagh Bursary in Mathematics and Natural Philosophy*, annual value £48, tenable for three years in Theology, Law, or Medicine. Open to students who are presenting themselves for the final examination for the degree of M.A. with Honours in Mathematics and Natural Philosophy.

78. *John Clark (Mile-End) Scholarship in Mathematics and Natural Philosophy*, annual value £50, tenable for four years. Open to all Protestant students of good moral character, sons or daughters of Protestant parents, and who have completed their curriculum in Arts in Glasgow University.

79. *William Euing Fellowship in Mathematics and Natural Philosophy*, annual value £100, tenable for three years. Open to Glasgow Masters of Arts.

80. *John Clark (Mile-End) Scholarship in Semitic Languages*, annual value £50, tenable for four years. Open to all Protestant students of good moral character, sons or daughters of Protestant parents, and who have completed their curriculum in Arts in Glasgow University.

81. *Luke Fellowship in English*, annual value £95, tenable for three years. Open to Glasgow Masters of Arts. For subjects of examination (English Literature and History) see p. 403.

82. *John Clark (Mile-End) Scholarship in English*, annual value £50, tenable for four years. Open to all Protestant students of good moral character, sons or daughters of Protestant parents, and who have completed their curriculum in Arts in Glasgow University.

83. *Gladstone Memorial Prize* of books to the value of £5 is open to graduates of this University who have taken the degree of M.A. with Honours or to students presenting themselves in October, 1907, for examination for the Degree of M.A. with Honours in Economic Science, but no one whose Arts course began before session 1901-2 is eligible. See p. 421.

84. *Snell Exhibition*, total value £400, tenable for five years. (See p. 411.) Candidates must have been born in Scotland, or must be sons of fathers born in Scotland, and must "have resided as undergraduate students for two years at least in Glasgow College, or for one year in that College and two at least in some other College in Scotland."

85. *Gladstone Historical Prize* of £21 open to graduates of Glasgow University of not more than two years' standing from the date of their first graduation.

86. *Sandford Scholarship*, annual value £20, tenable for two years. Open to all matriculated students (not Masters of Arts) who have attended the public Greek classes for not less than two sessions.

87. *Thomas Logan Memorial Medal and Prize* will be awarded in April, 1908, to the graduate in Arts of the year 1907 who shall have obtained the highest marks in the Degree examinations.



## DATES OF EXAMINATIONS.

The examinations for Bursaries Nos. 1 to 57 and 62 in the above list will commence on Friday, 27th September, at 9 a.m. The examination papers will be given in the following order, viz. :—

On Friday,	27th September,	9—11 a.m.,	English (1st paper).
"	"	12— 2 p.m.,	Higher Latin (1st paper).
"	"	3— 6 p.m.,	Lower Latin.
On Saturday,	28th	9—11 a.m.,	English (2nd paper).
"	"	12— 2 p.m.,	Intermediate and Higher Mathematics (1st paper).
"	"	3— 6 p.m.,	Lower Greek.
On Monday,	30th	9—11 a.m.,	Higher Latin (2nd paper).
"	"	12— 2 p.m.,	Intermediate and Higher Mathematics (2nd paper).
"	"	3— 6 p.m.,	Lower Mathematics.
On Tuesday,	1st October,	9—11 a.m.,	Higher Greek (1st paper).
"	"	12— 2 p.m.,	French (1st paper).
"	"	3— 6 p.m.,	Dynamics.
On Wednesday,	2nd	9—11 a.m.,	Higher Greek (2nd paper).
"	"	12— 2 p.m.,	French (2nd paper).
"	"	3— 5 p.m.,	German (1st paper).
On Thursday,	3rd	9—11 a.m.,	German (2nd paper).
"	"	12— 2 p.m.,	German (additional paper).
"	"	3— 5 p.m.,	French (additional paper).
On Friday,	4th	9—11 a.m.,	Mathematics (additional paper).
"	"	12— 2 p.m.,	Latin (additional paper).
"	"	3— 5 p.m.,	Greek (additional paper).
On Saturday,	5th	1— 3 p.m.,	Dynamics (additional paper).

The examinations for Bursaries Nos. 58 to 61 will be held on Tuesday, 22nd Oct., at 9 a.m., and Wednesday, 23rd Oct., at 2 p.m. ; for Bursary No. 63, on Saturday, 28th September, at 12 noon, Monday, 30th September, at 12 noon, and Friday, 4th October, at 9 a.m. ; for Bursaries Nos. 64*a* and 64*b*, on Wednesday, 2nd October, at 2 p.m., and on Saturday, 5th October, at 2 p.m. ; for Bursary No. 65, on Tuesday, 1st October, at 12 noon, Wednesday, 2nd October, at 12 noon, and Thursday, 3rd October, at 3 p.m.

The examinations for the Bursaries, Scholarships, and Fellowships Nos. 71 to 83 inclusive, in the above list, will be held along with the examinations for Honours in the several departments for the Degree of M.A. in September-October, 1907 ; for No. 84 in December, 1907, at dates to be fixed hereafter ; for the Prize No. 85 in January, 1908 ; and for the Scholarship No. 86 in April, 1908.

## DATES FOR SENDING IN APPLICATIONS.

Candidates for the Bursaries Nos. 1 to 63 inclusive, and No. 65 are required to give in their names to the Assistant Clerk (Matriculation Office), not later than Monday, 9th September ; for Bursaries Nos. 64*a*, 64*b* and 71, not later than Monday, 16th September ; and for Bursaries Nos. 68 to 70, not later than 10th March, 1908. A schedule, which is to be filled up by each candidate, may be obtained from the Assistant Clerk (Matriculation Office). Candidates for Bursary No. 19 must, besides, give in their names to Mr. John Douglas,

Wellington Chambers, Ayr, before the first day of September; for No. 22 to W. H. Hill, LL.D., Clerk to the Merchants' House, before the first day of September; for Nos. 23 and 24, to Mr. G. B. Motherwell, Town Clerk, Airdrie, before the first day of September; for No. 25, to A. B. Barty, LL.B., Writer, Dunblane, before the first day of September; for No. 28, to Mr. Patrick Keith, Writer, Hamilton, before the first day of September; for No. 29, to Mr. Robert Brodie, 77 St. Vincent Street, before the first day of September; for Nos. 30 and 31, to Mr. Hugh Brown, C.A., 58 St. Vincent Street, before the fifteenth day of August; for Nos. 36 to 43, to Mr. W. H. Macdonald, Hutchesons' Buildings, Ingram Street, before the first day of September; for Nos. 44 and 45, to Mr. William Jenkins, Writer, Denny, before the first day of September; for No. 46, to the Town Clerk, City Chambers, Glasgow, before the first day of September; for No. 48, to Mr. P. A. Thomson, Town Clerk, Ayr, before the first day of September; for Nos. 49 to 52, to William Mitchell, LL.D., 134 Wellington Street, before the first day of September; for Nos. 55 and 56 to Messrs. Fyfe, MacLean & Co., 115 St. Vincent Street, before the first day of September; and for No. 57, to Messrs. Hill & Hoggan, 194 Ingram Street, before the first day of September.

Candidates for the Fellowships, etc., Nos. 71 to 83 inclusive, are required to give in their names to the Assistant Clerk (Matriculation Office), not later than 16th September; and for No. 85 before 1st December, 1907. For No. 84 candidates are expected to inscribe their names in a book kept at the Clerk of Senate's office for the purpose, not later than the 1st November, 1907.

## B.—FACULTY OF SCIENCE.

*Open to Competition during Session 1907-8.*

1. *Strang Bursary*, annual value £20, tenable for three years. Open to students of Engineering Science.

2 and 3. *Two Agricultural College Bursaries*, annual value £40 and £35, tenable for four years, for students of Agriculture.

4. *Lorimer Bursary in Mathematics*—see No. 63 under Faculty of Arts.

5 and 6. *Two Metcalfe Bursaries*, each of annual value £25, tenable for two years. Open to students entering the class of Chemistry or of Intermediate Honours Mathematics.

7. *Lloyd's Register Scholarship*, annual value £50, tenable for three years. Open to candidates intending to become students of Naval Architecture whose age does not exceed 23 years.

8. *George Young Bursary*, annual value £35, tenable for one year, for students in the class of Civil Engineering. To be awarded in October, 1907, to the eligible candidate with the best record in the First Science Examination.

9 and 10. *Muir Bursaries in Mathematics*—see Nos. 66 and 67 under Faculty of Arts.

11 and 12. *Muir Bursaries in Civil Engineering and Mechanics*, each of annual value £12 10s., tenable for session 1908-9. See p. 371.

13. *Alexander Donaldson Scholarship*, annual value £42, tenable for two years. See p. 394.

14. *Mackinnon Scholarship in Natural History (with Comparative Anatomy)*, £56, tenable for one year.

15. *Kirk Memorial Prize of £14* for students completing Final Science Examination for B.Sc. on the side of Naval Architecture. See p. 424.

16. *Lindsay Burnet Silver Medal*, for a Thesis in Engineering. See page 416.

The examinations for the Bursaries Nos. 1 to 3 will be held at the same time as the Arts and Science Preliminary Examinations in September-October, 1907; for No. 4 on Saturday, 28th September, at 12 noon, Monday, 30th September, at 12 noon, and Friday, 4th October, at 9 a.m.; for Nos. 5 and 6 on Friday, 27th September, at 9 a.m. and 3 p.m., on Saturday, 28th September, at 9 a.m., on Monday, 30th September, at 9 a.m., and on Friday, 4th October, at 9 a.m.; for No. 7 on Saturday, 28th September, at 12 noon, on Monday, 30th September, at 12 noon, on Tuesday, 1st October, at 2 p.m., on Friday, 4th October, at 9 a.m., and on Saturday, 5th October, at 1 p.m.; and for No. 14, on Tuesday, 1st October, at 9 a.m.

Names of Competitors to be given in to the Assistant Clerk (Matriculation Office), for Nos. 1 to 4 on 9th September, for Nos. 5 to 7 and for Nos. 13 and 14 on 16th September, and for Nos. 11 and 12 on 12th March, 1908.

For the *Denny Bursary*, the *1851 Exhibition Science Scholarships*, the *Dobbie Smith Gold Medal*, the *George Harvey Prize*, the *G. R. Muirhead Prize*, and the *Walker Prizes*, see pages 333, 397, 419, 422, 425, 427 respectively.

## C.—FACULTY OF MEDICINE.

1. *Mackintosh Bursary*, annual value about £31, tenable for one year. Open to medical students of either sex who have attended the Lectures on Insanity.

2 and 3. *Two Glasgow Highland Society Bursaries*, annual value of each £25, tenable for five years, for students of Highland descent. Apply to Mr. Hugh Brown, C.A., 58 St. Vincent Street, on or before 15th August.

4. *Merchants' House Bursary*, annual value £25, tenable for four years, open to students entering upon the first winter session of their medical curriculum.

5. *Lorimer Bursary*, annual value £24, tenable for three years. Open to medical students entering on their second winter session.

6. *Rainy Bursary*, annual value £20, tenable for two years. Open to students entering on their fourth session of medical study. See page 376.

7 and 8. *Two James A. Paterson Bursaries*, annual value £25 and £20 respectively, tenable for four years. Open to students entering on their first or second session of medical study. Examination in Mathematics and Dynamics.

9. *Dr. Thomas Gibson Bursary*, annual value £36, tenable for four years. Open to medical students entering on their second winter session who are preparing for service as medical missionaries. It will be awarded to the qualified candidate who has gained the highest number of marks in the First Professional Examination. See p. 342.

10. *Arthur Bursary*, annual value £20, tenable for three years, will be awarded in November to the Queen Margaret student who takes the highest place in the First Professional Examination in March and October, 1907.

11. *Davidson Bursary*, annual value £32, tenable for three years, will be awarded in accordance with the results of the First Professional Examination, a preference being given as stated at page 333.

12. *William Gardiner Bursary*, annual value £14, tenable for two years, will be awarded in November, 1907, for proficiency in Physiology, Chemistry, and Physics. See page 340.

13. *John Monteith Bursary*, annual value about £21, tenable for two years, will be awarded in November to the student who gains the highest number of marks in Anatomy and Physiology in March and October, 1907.

14. *Andrew Weir Bursary*, annual value £16, tenable for one year, will be awarded in November in accordance with results of Second and Third Professional Examinations.

15. *Junior Arnott Prize*, of about £15, for an examination in General Physics, open to students of the first and second years of their medical studies.

16. *Senior Arnott Prize*, of £25, for an examination in Physiological Physics, open to students of the third and fourth years of their medical studies.

17. *Brunton Memorial Prize*, of about £10, is given to the most distinguished graduate in Medicine of the year.

18. *Joseph Coats Memorial Scholarship*, £80 in value, tenable for one year. See page 393.

For the *Denny*, the *Hutchesons' Educational Trust*, the *Pratt*, the *William Whyte*, the *Armagh*, and the *James Ferguson Bursaries*, also tenable by students of Medicine, see Nos. 20, 39 to 43, 55, 56, 57, 72, and 71, under Faculty of Arts. For the *Andrew and Bethia Stewart Bursaries*, see p. 380; and for the *M'Cunn Research Scholarships* tenable by Graduates, see p. 403.

#### DATES OF EXAMINATIONS.

The examinations for the Bursary No. 1 in the above list will be held in June, for Nos. 2 to 4, at the same time as the Medical Preliminary; for No. 5 on Monday, 30th September, at 9 a.m. and 2 p.m., on Tuesday, 1st October, at 9 a.m.; for Nos. 7 and 8, on Saturday, 28th September, at 12 noon; Monday, 30th September, at 12 noon; Tuesday, 1st October, at 3 p.m.; Friday, 4th October, at 9 a.m., and Saturday, 5th October, at 1 p.m.; and for the Prizes Nos. 15 and 16 on Friday, 4th October, at 2 p.m.

## DATES FOR SENDING IN APPLICATIONS.

Candidates for the Bursary No. 1 are required to give in their names to the Assistant Clerk (Matriculation Office), not later than 1st June ; for Bursaries Nos. 2 to 8, not later than 9th September ; and for Prizes 15 and 16, and the Scholarship No. 18, not later than 16th September.

## D.—FACULTY OF LAW.

1. *Major Young's Fund Bursary*, annual value £22, tenable for two years, open to students of the first year in Law. Names of candidates to be given in not later than 10th September. Competitors for No. 1 are required to attend the Arts Preliminary and Bursary Examination. For subjects and times see page 435.

2. *Robert Macfarlane Bursary*, annual value about £27, for proficiency in Scots Law, tenable during session 1908-9. See p. 362.

3. *Robert Macfarlane Bursary*, annual value about £27, for proficiency in Conveyancing, tenable during session 1908-9. See p. 362.

4. *Andrew Cunninghame Bursary*, value about £35, tenable for one year, for proficiency in Scots Law. See p. 332.

5. *Andrew Cunninghame Bursary*, value about £35, tenable for one year, for proficiency in Conveyancing. See p. 332.

Names of Candidates for the Bursaries, Nos. 2 to 5 are to be given in to the Assistant Clerk (Matriculation Office), not later than 10th March.

For the *Denny*, the *Hutchesons' Educational Trust*, the *Pratt*, the *William Whyte*, the *Armagh*, and the *James Ferguson Bursaries*, also tenable by students of Law, see Nos. 20, 39 to 43, 55, 56, 57, 72, 77, and 71, under Faculty of Arts. For the *Andrew and Bethia Stewart Bursaries* see p. 380.

## E.—FACULTY OF THEOLOGY.

*Open to Competition during Session 1907-1908.*

1. *John Adam Bursary*, annual value £18, tenable for four years. Open to students of Theology of the first year.

2. *Logan Bursary*, annual value £17, tenable for three years. Open to students of Theology of the first year.

3. *Hastie Bursary*, annual value £25, tenable for three years. Open to students of Theology of the first year who are Masters of Arts of any Scottish University, or who have passed all the examinations for graduation in Arts.

4. *Lorimer Bursary*, annual value £24, tenable for three years. Open to students entering the Divinity Hall.

5 and 6. *Two King William's Bursaries*, each of the annual value of £20, tenable for three years. Open to all students who are Masters of Arts, or who have passed all the examinations necessary for graduation in Arts, and who are entering on their first year of attendance on a course of study in the University for graduation in Divinity.

7. *James Macfarlane Bursary*, annual value £25, tenable for three years. Open to students of Divinity of the first year, who hold a degree

in Arts of any Scottish University, or who have passed their examinations in any four subjects, taken out of at least two departments, for graduation in Arts. Preference to the name Macfarlane.

8. *Marshall Bursary*, annual value £16, tenable for four years. Open to students of Theology of the first year, with a preference to the name Marshall.

9. *William Muir Divinity Bursary*, annual value £25, tenable for two years. Open to candidates who have passed the examination of the Examining Board for entrance to the Divinity Hall of the University. Apply to Mr. W. H. Macdonald, Hutchesons' Buildings, Ingram Street, not later than 10th October.

10. *The Jamieson Prize*, value about £10 sterling, for examination in the subjects of the first department for the degree of B.D. Open to students who shall complete the ordinary curriculum of Theological study in the University of Glasgow in March, 1908, or who shall have completed their course at the close of the session immediately preceding.

11. *The Findlater Scholarship Prize*, value about £38 sterling, for examination in the subjects of the second department for the degree of B.D. Open to students who shall complete the ordinary curriculum of Theological study in the University of Glasgow in March, 1908, or who shall have completed their course at the close of the session immediately preceding.

12. *Black Theological Fellowship*, annual value about £140, tenable for two years. Open to Masters of Arts from any of the Universities of Scotland who shall complete the ordinary curriculum of Theological study in the University of Glasgow in March, 1908, or who shall have completed that curriculum in any of the three preceding years.

13. *The Macfarlan and Cook Testimonial Prize*, of £21, open to Theological students of three years' standing. Examination in Greek, Moral Philosophy, Hebrew, Church History, and Divinity.

14 and 15. *Dowanhill Prizes*, one of £20, and the other of £10, for Elocution. Open to students of Divinity of the third year.

For the *Armagh* and the *James Ferguson Bursaries*, also tenable by students of Divinity, see Nos. 72, 77, and 71 under Faculty of Arts.

#### DATES OF EXAMINATIONS.

The examinations for Nos. 1 to 10 inclusive, in the above list, will be held on Tuesday, 22nd October, and Wednesday, 23rd October, at 9 a.m. each day; and for Nos. 11 and 12, on Thursday, 2nd April, and Friday, 3rd April, at 9 a.m. each day.

#### SUBJECTS OF EXAMINATION.

Candidates for Bursaries Nos. 1 to 9 inclusive may select any seven out of the nine subjects in the following list, but candidates for No. 1 must not in making their selection leave out any of the first six subjects:—

LATIN.—Horace, *Ars Poetica*; Translation from English into Latin.

GREEK.—The Gospel according to Mark.

LOGIC.—Jevons, *Elementary Lessons in Logic*.

MORAL PHILOSOPHY.—Muirhead, *Elements of Ethics*.

MATHEMATICS.—Euclid, Books I., II., III. Algebra to Quadratic Equations, inclusive.

NATURAL PHILOSOPHY.—Deschanel, *Physics*, Part I.

ENGLISH.—Morley, *First Sketch of English Literature*, Chapter XIII. A short essay will be prescribed.

HEBREW.—Book of Genesis.

HISTORY.—Robertson's *History of Charles V.*

The subjects of examination for No. 10 are the same as for the first department, and for Nos. 11, 12 are the same as for the second department of the Degree of Bachelor of Divinity, with additional subjects in the case of No. 12.

The subjects of examination for the Prize No. 13 for Session 1907-8 are as follows:—

GREEK.—Sophocles, *Antigone*.

DIVINITY.—Biblical Theology.—The Epistle to the Hebrews.

HEBREW.—Amos and Micah.

CHURCH HISTORY.—History of the Church in England, Scotland, and Ireland from 1760 to 1820.

MORAL PHILOSOPHY.—Butler, *Three Sermons on Human Nature*.

#### DATES FOR SENDING IN APPLICATIONS.

Candidates for Nos. 1 to 10 inclusive are required to give in their names to the Assistant Clerk (Matriculation Office), not later than 16th October, 1907; for Nos. 11 and 12, not later than 27th March, 1908; for the Prize No. 13 to the Professor of Divinity, not later than 1st November, 1907; and for the Prizes Nos. 14 and 15, to the Professor of Divinity, not later than 19th March, 1908.

### 5.—PATRONAGE BURSARIES, 1907-8.

#### A.—FACULTY OF ARTS.

Appointments to the following Bursaries in the gift of Patrons, including bodies corporate and not corporate, fall to be made before the opening of session 1907-8. Candidates are required to present themselves for the Arts Preliminary Examinations, and for this purpose their names must be given in to the Assistant Clerk (Matriculation Office), on or before 4th September.

1. *Ardkinglass Bursary*, see page 321.

2. *Dundonald Bursary*, see page 334.

3. *Hamilton Bursary*, see page 345.

4 and 5. *Williams Bursaries*, see page 386.

#### B.—FACULTY OF THEOLOGY.

1. *Boyd and Sanders Bursary*, see page 325.

2. *Dundonald Bursary*, see page 334.

4. *Hamilton Bursary*, see page 345.

N.B.—For information regarding the Auld Bursary and the Sharp Bursary in the gift of the Presbytery of Perth for students preparing for the ministry of the Church of Scotland, apply to the Clerk of the Presbytery, the Rev. John Ferguson, B.D., Aberdalgie, Perth.

#### C.—FACULTY OF MEDICINE.

*John Gibson Bursary*, see page 341.

## 6.—UNIVERSITY PRIZE ESSAYS.

FOR SESSION 1907-8.

1. In Mental Philosophy, the UNIVERSITY SILVER MEDAL, for the best essay on "Experience and Reality." All students of the Classes of Logic, Moral Philosophy or English Literature, in Session 1906-7, or 1907-8, may be competitors.

2. THE GARTMORE GOLD MEDAL, for the best essay on "The Ethical and Political Aspects of Municipal Trading." All matriculated students of the University in Session 1907-8 may be competitors.

3. A COULTER PRIZE OF FIVE POUNDS, for the best essay on "The Transcendental Movement in English Literature."

4. A COULTER PRIZE OF FIVE POUNDS, for the best study of the date, authorship, and literary history of the *Moretum* in the Appendix Vergiliana.

For the Coulter Prizes all matriculated students of the University in session 1907-8 may be competitors.

5. THE HENDERSON PRIZE OF TWENTY GUINEAS, for the best essay on "The Scientific and Social Arguments for the Day of Rest." All matriculated students of the University in Session 1907-8, and all Masters of Arts who graduated in November, 1902, or thereafter, may be competitors.

6. THE DOBBIE-SMITH GOLD MEDAL, for the best description and illustration of the external characters, structure, development, and processes of reproduction, with drawings and specimens, of any one of the following plants, viz., the common mustard, the sycamore, and barley. All matriculated students of session 1907-8 may be competitors. Essays to be given in to the Principal on or before 1st December, 1907.

The essays, with the exception noted above (No. 6), must be given in to the Principal on or before Thursday, 31st October, 1907, after which day none can be received. Each must be distinguished by two mottoes, and accompanied by a sealed letter bearing on the outside the same mottoes, and containing a declaration subscribed by the author that the essay is entirely of his own composition. All quotations in the essays must be carefully marked, and accurate references to their respective authorities given in the notes. The Senate reserves the power of withholding the prize for any subject, if none of the essays on that subject reaches a sufficiently high standard of merit.

## EWING GOLD MEDAL IN SESSION 1908-9.

The subject for the essay in the competition for the Ewing Gold Medal, open to matriculated students in Session 1908-9, will be, "The Relations of Scotland and France during the Hundred Years War."

## DOBBIE-SMITH GOLD MEDAL IN SESSION 1908-9.

The subject will be the same as that given above. Essays to be given in to the Principal on or before 1st December, 1908.



# XI.—HONOURS LIST.

NAMES OF GRADUATES WITH HONOURS SINCE THE YEAR 1827.

## BACHELORS OF ARTS (B.A.).

		Honourable Distinction.	Highest Distinction.
827	<sup>1</sup> Alfred Day, . . . England,	. . . .	{ Classics. Mental Philosophy.
831	James Halley, . . . Scotland,	. . . .	{ Classics. Mental Philosophy.
838	William Makellar, . . . „	Classics.	
„	Francis Tucker, . . . England,	Classics.	
840	<sup>1</sup> John Daniel Morell, . . . „	{ Classics. Mental Philosophy.	
842	<sup>1</sup> Nathaniel Haycroft, . . . „	{ Classics. Mental Philosophy.	
843	<sup>1</sup> David M'Lauchlan, . . . Scotland,	{ Classics. Mental Philosophy.	
852	Samuel Crussha Sarjant, England,	. . . .	{ Classics. Mental Philosophy.
856	<sup>1</sup> Joseph David Everett, . . . „	{ Classics. Mental Philosophy.	
„	David Johnston, . . . „	Mental Philosophy.	
857	Wm. Thomson Johnston, Scotland,		Classics.
„	Andrew Moody, . . . „	Mental Philosophy.	
„	<sup>1</sup> William Ralph Pattison, „	{ Classics. Mental Philosophy.	
858	John MacLeod, . . . „	. . . .	Mental Philosophy.
„	<sup>2</sup> Peter Sinclair Menzies, . . . „	Classics.	
859	<sup>1</sup> George Porter, . . . „	{ Classics. Mental Philosophy.	
„	<sup>1</sup> Joseph Gardner, . . . „	Mental Philosophy.	
860	<sup>1</sup> Richard Vary Campbell, „	. . . .	Mental Philosophy.
„	<sup>1</sup> Daniel Munro, . . . „	Classics.	
861	<sup>1</sup> John M'Lean, . . . „	{ Classics. Mental Philosophy.	
„	<sup>1</sup> Thomas Carruthers, . . . „	{ Classics. Mental Philosophy.	
„	<sup>1</sup> William Stewart, . . . „	{ Classics. Mental Philosophy.	
„	<sup>2</sup> David Thomas, . . . „	Mental Philosophy.	
„	<sup>1</sup> George Matheson, . . . „	Mental Philosophy.	
„	<sup>1</sup> Henry William Bell, . . . India,	Mental Philosophy.	
„	<sup>1</sup> Thomas Robinson, . . . England,	Mental Philosophy.	

<sup>1</sup> Graduated M.A. in the following year.      <sup>2</sup> Graduated M.A. three years later.

<sup>3</sup> Graduated M.A. two years later.

## MASTERS OF ARTS (M.A.).

		Honourable Distinction.	Highest Distinction.
1827	George Samuel Evans, . England,	. . . .	{ Classics. { Mental Philosophy.
,,	William Cooper, . . Scotland,	{ Classics. { Mental Philosophy.	
1828	William Acworth, . England,	. . . .	{ Classics. { Mental Philosophy.
,,	Samuel Macurdy Greer, Ireland,	. . . .	{ Classics. { Mental Philosophy.
,,	James Rankine, . . Scotland,	{ Classics. { Mental Philosophy.	
,,	William Baird, . . . "	{ Classics. { Mental Philosophy.	
,,	John Reid, . . . England,	Physical Science.	
,,	Alexander Ure, . . Scotland,	Physical Science.	
1831	David L. Arnot, . . . "	. . . .	Classics.
,,	John Jenkins, . . . Wales,	Classics.	
,,	Robert Cotton Mather, . England,	Classics.	
,,	Neil M'Michael, . . Scotland,	Physical Science.	
1832	Andrew Borland Parker, . . "	. . . .	Classics.
1836	John Cunningham, . . . "	. . . .	Physical Science.
,,	William Fulton, . . . "	{ Classics. { Mental Philosophy.	
1837	Richard Shaen, . . . England,	Physical Science.	
,,	Thomas Elliot Richardson, . . "	Physical Science.	
,,	John Blair, . . . Ireland,	Physical Science.	
,,	William Cuthell, . . . Scotland,	Physical Science.	
1840	Duncan Harkness Weir, . . . "	Physical Science.	
,,	James Thomson, . . . Ireland,	Physical Science.	
,,	John Buchanan, . . . Scotland,	Physical Science.	
1841	William Arthur Jones, . . . Wales,	{ Classics. { Mental Philosophy.	
1842	Alexander Grierson, . . Scotland,	Physical Science.	
,,	John Davies, . . . England,	{ Classics. { Mental Philosophy.	
1843	John Trafford, . . . . "	{ Classics. { Mental Philosophy.	
,,	David Duff, . . . . Scotland,	Physical Science.	
1844	John Morgan, . . . . . "	Physical Science.	
,,	John Thomson, . . . . Ireland,	Physical Science.	
,,	William Turnbull Ker, . . Scotland,	Physical Science.	
,,	Richard Tomlinson, . . England,	{ Classics. { Mental Philosophy.	
1846	Robert Graham, . . . . Scotland,	Physical Science.	
1847	William John Steele, . . Ireland,	Physical Science.	
,,	James Porter, . . . . . "	Physical Science.	
1848	Adam Milroy, . . . . . Scotland,	{ Classics. { Mental Philosophy.	
,,	Walter David Jeremy, . . England,	{ Classics. { Mental Philosophy.	

		Honourable Distinction.	Highest Distinction.
49	John Kerr, . . . . Scotland,	. . . . .	Physical Science.
"	George M'Queen, . . . . "	. . . . .	Physical Science.
"	Henry Martyn Barker, . England,	. . . . .	{ Classics.
"	John Newton Langley, . . . . "	. . . . .	{ Mental Philosophy.
"			{ Classics.
"			{ Mental Philosophy.
50	Alexander Walker, . . Scotland,	{ Classics.	
"	Horatio Lindsay Taplin, England,	{ Mental Philosophy.	
"	Robert Masters Theobald, . . . . "	{ Classics.	
"		{ Mental Philosophy.	
51	Carstairs Douglas, . . Scotland,	Physical Science.	
"	Daniel Davies Jeremy, . . England,	{ Classics.	
"		{ Mental Philosophy.	
52	Thomas Logan, . . . . Scotland,	Physical Science.	
"	James Wylie Johnston, . . . . "	{ Classics.	
"		{ Mental Philosophy.	
53	Charles Abercromby Smith, . . . . "	. . . . .	Physical Science.
"	William Jack, . . . . .	. . . . .	Physical Science.
"	Edward John Gibbs, . . England,	. . . . .	{ Classics.
"			{ Mental Philosophy.
56	James Galbraith, . . . . Scotland,	Physical Science.	
"	John Murray, . . . . .	Physical Science.	
57	Joseph David Everett, . . England,	. . . . .	Physical Science.
"	George Monro Grant, Nova Scotia,	. . . . .	Mental Philosophy.
"	David Herbert, . . . . Scotland,	Mental Philosophy.	
"		{ Classics.	
"	Neil Macpherson, . . . . .	{ Mental Philosophy.	
58	John Weir, . . . . .	Mental Philosophy.	
59	Robert Whyte, . . . . .	Mental Philosophy.	
60	Walter Roberts, . . . . .	Mental Philosophy.	

## MASTERS OF ARTS (M.A.).

Ordinances No. 14, Sections vi., vii., viii. ; No. 18, Section iii. (1858).

		Class of Honours and Department.			
		Classics.	Mental Philos.	Math & Nat. Phil.	Natural Science.
62	John Ferguson, . . . . Scotland,	...	...	...	I
66	John Mann, . . . . .	I	...	...	...
"	John Fergusson, . . . . .	...	II	...	...
67	William E. Grigsby, . . . . England,	II	...	...	...
"	James Smith, . . . . .	...	...	I	...
"	William Ross, . . . . .	...	...	II	...
68	Robert Stewart, . . . . .	...	I	...	...
"	John Wilson, . . . . .	...	I	...	...

					<i>Class of Honours and Department.</i>			
					Classics.	Mental Philos.	Math. & Nat. Phil.	Natural Science.
1869	Favour James Greg,	.	.	Scotland,	...	I	...	...
"	Adam Semple,	.	.	"	...	I	...	...
"	Joseph Loudon,	.	.	"	...	...	II	...
"	James M'Intosh,	.	.	"	...	I	...	...
1870	John Cross,	.	.	U.S.A.,	I	I	...	...
"	Matthew M. Dickie,	.	.	England,	II	I	...	...
"	James Orr,	.	.	Scotland,	...	I	...	...
"	Robert A. Sinclair,	.	.	"	...	II	...	...
"	James D. H. Dickson,	.	.	"	...	...	II	...
"	Dugald M'Kichan,	.	.	"	...	...	II	...
1871	William S. Fleck,	.	.	"	...	I	...	...
"	William Oliver,	.	.	Wales,	...	II	...	...
"	John E. H. Thomson,	.	.	Scotland,	...	II	...	...
"	Colin R. M'Clymont,	.	.	"	...	I	...	...
"	Charles S. Dickson,	.	.	"	...	II	II	...
1872	William Hamilton,	.	.	"	...	I	...	...
"	John Watson,	.	.	"	...	I	...	...
"	Zachary M. H. Ross,	.	.	"	...	II	...	...
"	Archibald Russell,	.	.	"	...	II	...	...
"	William G. Miller,	.	.	"	...	...	II	...
"	John M. Brown,	.	.	"	...	I	...	...
"	Alexander S. Macphee,	.	.	"	...	I	...	...
"	James C. MacTaggart,	.	.	"	...	...	I	...
"	James Henderson,	.	.	"	...	...	II	...
1873	William Bathgate,	.	.	"	I	...	...	...
"	John M'Cunn,	.	.	"	...	I	...	...
"	Thomas L. Galloway,	.	.	"	...	...	I	...
"	David Hunter,	.	.	"	II	I	...	...
"	Robert Harvey,	.	.	"	I	...	...	...
"	Thomas H. Miller,	.	.	"	...	...	I	...
"	Buchanan Blake,	.	.	"	...	II	...	...
"	James Arthur,	.	.	"	...	...	II	...
1874	James Bonar,	.	.	"	I	I	...	...
"	James G. Frazer,	.	.	"	I	...	...	...
"	Alexander F. Fraser,	.	.	"	...	I	...	...
"	John Wilson Reid,	.	.	"	I	...	II	...
"	Colin Campbell,	.	.	"	II	I	...	...
"	James Thomson,	.	.	"	...	I	...	...
"	Hugh Hart Currie,	.	.	"	II	...	...	...
"	James MacKay,	.	.	"	...	II	...	...
1875	Benjamin F. C. Costelloe,	.	.	Ireland,	II	I	...	...
"	William Yuill King,	.	.	Scotland,	I	...	...	...
"	William Patrick,	.	.	"	...	I	...	...
"	John Patrick,	.	.	"	II	...	...	...
"	James S. Russell,	.	.	"	...	...	I	...
"	John C. Watt,	.	.	"	...	...	I	...
"	John B. Douglas,	.	.	England,	II	...	...	...
"	Neil D. MacLachlan,	.	.	Scotland,	...	II	...	...
"	James Johnston Dobbie,	.	.	"	...	...	...	I
1876	James Lambie,	.	.	"	...	I	...	...
"	Ebenezer B. Speirs,	.	.	"	...	I	...	...

			Class of Honours and Department.			
			Classics.	Mental Philos.	Math. & Nat. Phil.	Natural Science.
76	Islay F. Burns, . . . .	Scotland,	II	...	...	...
	Robert MacLehose, . . . .	"	...	II	...	...
	Joseph Conn, . . . .	"	...	...	II	...
	Robert H. Pinkerton, . . . .	"	...	...	II	...
	David Wilson, . . . .	"	...	...	II	...
	John P. Mitchell, . . . .	"	...	I	...	...
	William M. Rankin, . . . .	"	...	I	...	...
	Andrew Gray, . . . .	"	...	...	II	...
77	Wallace M. Lindsay, . . . .	"	I	II	...	...
	Alexander S. Wilson, . . . .	"	...	...	...	I
	James Kidd, . . . .	"	...	I	...	...
	Thomas B. Kilpatrick, . . . .	"	...	I	...	...
	Mungo W. McCallum, . . . .	"	...	II	...	...
	William Allan, . . . .	"	...	...	II	...
	James Arthur, . . . .	"	...	...	II	...
78	Robert Mackintosh, . . . .	"	II	I	...	...
	John Edgar, . . . .	"	I	...	...	...
	John M. Dodds, . . . .	"	...	...	I	...
	David W. Forrest, . . . .	"	...	II	...	...
	Alexander Isdale, . . . .	"	...	I	...	...
	Lewis A. Muirhead, . . . .	"	...	I	...	...
	James Wilson, . . . .	"	II	...	II	...
79	John Wilson Marshall, . . . .	"	I	II	...	...
	Francis Wm. Clark, . . . .	"	II	II	...	...
	Henry Jones, . . . .	Wales,	...	I	...	...
	William T. Bankhead, . . . .	Scotland,	...	II	...	...
	Andrew Rutherford, . . . .	"	...	II	...	...
	James Thomson, . . . .	Ireland,	...	...	II	...
	James Denney, . . . .	Scotland,	I	I	...	...
	James Kippen Duff, . . . .	"	I	...	...	...
	Robert Tannahill Younger, . . . .	"	...	II	...	...
	William L. Macindoe, . . . .	"	...	...	II	...
80	Alexander Gregory, . . . .	"	II	...	...	...
	Thomas Gregory, . . . .	"	I	I	I	...
	Alexander N. Cumming, . . . .	"	II	II	...	...
	Hugh Young Reyburn, . . . .	"	II	II	...	...
	John G. A. Dow, . . . .	"	II	...	...	...
	John Henderson, . . . .	"	...	II	...	...
11	Cecil J. Swan, . . . .	"	II	...	...	...
	Francis H. Stead, . . . .	England,	II	I	...	...
	David S. Adam, . . . .	Scotland,	...	I	...	...
	William Granger, . . . .	"	...	I	...	...
	Robert F. Muirhead, B.Sc., . . . .	"	...	...	I	...
	Alexander Russell, . . . .	"	...	...	I	...
	Patrick H. Aitken, . . . .	"	II	...	...	...
	Alexander Anderson, . . . .	"	II	...	...	...
	Robert T. London, . . . .	"	...	II	...	...
	Robert Veitch, . . . .	England,	...	II	...	...
	James Maclay, . . . .	Scotland,	...	...	II	...
	John Stuart, . . . .	"	...	...	II	...
	James Hamilton, . . . .	"	...	...	II	...

			Class of Honours and Department.			
			Classics.	Mental Philos.	Math. & Nat. Phil.	Natural Science
1882	James A. McCallum,	Scotland,	...	I	...	...
"	John H. Fullarton,	"	...	...	...	I
"	Charles P. Blair,	"	...	II	...	...
"	James M. Dodds,	"	I	...	...	...
"	John S. MacKenzie,	"	...	I	...	...
"	William Smart,	"	...	I	...	...
"	John Weir,	"	...	...	I	...
"	John Gray,	"	...	II	...	...
"	Charles Steele,	"	...	II	...	...
1883	John Aitken Orr,	"	...	I	...	...
"	Alexander Robinson,	"	...	II	...	...
"	Lewis Hughes,	Wales,	...	II	...	...
"	Francis Anderson,	Scotland,	...	I	...	...
"	Wm. S. McKechnie,	"	...	I	...	...
"	William Muir,	"	...	I	...	...
"	James W. Inglis,	"	II	...	...	...
"	Patrick H. Hutchinson,	Ireland,	II	...	...	...
"	Robert A. Moody,	Scotland,	II	...	...	...
"	William T. Mitchell,	"	...	...	II	...
1884	Andrew A. Mitchell,	"	I	...	...	...
"	James McMillan,	"	I	...	...	...
"	Archd. S. Laidlaw,	"	...	I	...	...
"	John Mack,	"	...	...	I	...
"	William Clark,	"	II	...	...	...
"	John Struthers,	"	II	I	...	...
"	Archibald McLean,	"	I	...	...	...
"	John Adams,	"	...	I	...	...
"	James Barr,	"	...	I	...	...
"	Gavin Lambie,	"	...	I	...	...
"	Robert M. Wenley,	"	...	I	...	...
"	George G. Henderson,	"	...	...	...	I
"	Campbell N. Moody,	"	II	II	...	...
"	Hugh Stevenson,	"	...	II	...	...
"	James Strachan,	"	...	...	II	...
"	Alex. B. Symington,	"	II	...	...	...
1885	John Lee,	"	I	...	...	...
"	James Buchanan,	"	...	...	I	...
"	Norman Fraser,	"	...	...	I	...
"	James P. McLaren,	"	II	...	...	...
"	William Binnie,	"	...	II	...	...
"	David Frew,	"	...	II	...	...
"	Richard Glaister,	"	...	II	...	...
"	David Houston,	"	...	II	...	...
"	Walter Wingate,	"	...	...	II	...
"	William M. Mackay,	"	...	I	...	...
"	Andrew F. Smith,	"	...	I	...	...
"	Alex. L. Watson,	"	II	...	...	...
"	Archibald J. Macnicol,	"	...	...	II	...
1886	Charles F. Fleming,	England,	...	I	...	...
"	Wellstood A. Watt,	Scotland,	...	I	...	...
"	John Dougall,	"	...	...	I	...

			Class of Honours and Department.			
			Classics.	Mental Philos.	Math. & Nat. Phil.	Natural Science.
1886	John M'Cowan, B.Sc.,	Scotland,	...	...	I	...
"	William H. Carslaw,	"	...	...	II	...
"	Magnus M'Lean,	"	...	...	II	...
"	John A. Cramb,	"	I	...	...	...
"	Robert A. Duff,	"	...	I	...	...
"	William Johnston,	"	...	II	...	...
"	James Macmillan,	"	...	...	II	...
"	Robert A. Nicolson,	"	...	...	II	...
1887	James Finlayson,	"	...	...	II	...
"	James Gifford,	"	...	II	...	...
"	Charles Mackay Gordon,	W. Indies,	...	I	...	...
"	David Smith,	Scotland,	I	...	...	...
"	John Watson Bryson,	"	...	I	...	...
"	Robert Gardner,	"	...	II	...	...
"	James Gilfillan,	"	...	I	...	...
"	Daniel Kirkwood,	"	...	II	...	...
"	Alexander Lucas Taylor,	"	II	...	...	...
"	John Thomson,	"	...	...	II	...
1888	John Esslemont Adams,	"	II	...	...	...
"	Archibald Lamont,	"	...	II	...	...
"	Arthur David Millar,	"	I	...	...	...
"	John Dickson Sinclair,	"	...	II	...	...
"	Evan Keri Evans,	Wales,	...	I	...	...
"	Robert Kennedy, B.Sc.,	Scotland,	...	...	...	I
"	John Liddle King,	"	...	II	...	...
"	Malcolm Macnicol,	"	...	...	II	...
"	Ernest Findlay Scott,	England,	I	I	...	...
"	Robert Scrymgeour,	Scotland,	...	I	...	...
"	Robert Reid Strachan,	"	...	II	...	...
"	John Cunningham Walker,	"	...	II	...	...
1889	Norman de Garis Davies,	England,	...	II	...	...
"	George Davidson Kempt,	Scotland,	...	II	...	...
"	Alfred Ernest Garvie,	Poland,	...	I	...	...
"	John Hunter Harley,	Scotland,	...	I	...	...
"	John Brownlee,	"	...	...	I	...
1890	James Fairlie Gemmill,	"	I	...	...	...
"	John Edgar M'Fadyen,	"	I	...	...	...
"	James Robertson Cameron,	"	...	I	...	...
"	James Moffatt,	"	...	II	...	...
"	James Peter Wilson,	"	...	II	...	...
"	John Easton Black,	"	...	II	...	...
"	George Douglas Brown,	"	I	...	...	...
"	Robert Bulloch Douglas,	"	...	I	...	...
"	Peter Pinkerton,	"	...	...	I	...
"	Douglas Blyth Binning,	"	...	II	...	...
"	Robert Baillie Douglas,	"	...	II	...	...
"	James Hair Maclean,	"	...	II	...	...
"	Gilbert Buchanan,	"	...	...	II	...
"	Alexander Holm,	"	...	...	II	...
1891	John Hamilton Pagau	"	I	...	...	...
"	John Gillies,	"	II	...	...	...

			Class of Honours and Department.			
			Classics.	Mental Philos.	Math. & Nat. Phil.	Natural Science.
1891	John M'Gilechrist, . . . . .	Scotland,	II	...	...	...
"	Horatio Scott Carslaw, . . . . .	"	...	...	I	...
"	James Holm, . . . . .	"	...	...	I	...
"	Nicol Macnicol, . . . . .	"	II	II	...	...
"	John White, . . . . .	"	...	II	...	...
1892	David Donaldson Robertson, . . . . .	"	...	I	...	...
"	Daniel Lamont, . . . . .	"	...	II	I	...
"	John Gillespie Spens, . . . . .	"	II	...	...	...
"	Alexander Taylor, . . . . .	"	II	...	...	...
"	Walter Stewart, . . . . .	"	...	...	I	...
1893	Donald Nicol Dow, . . . . .	"	I	...	...	...
"	Gilchrist Gibb Alexander, . . . . .	"	...	I	...	...
"	Robert Stevenson Horne, . . . . .	"	...	I	...	...
"	William Sandilands Templeton, . . . . .	"	...	...	I	...
"	Wm. Carriek Anderson, . . . . .	"	...	...	...	I
"	Edward H. Wallace, . . . . .	"	II	...	II	...
1894	Campbell M. Macleroy, . . . . .	"	I	...	...	...
"	Robert George Nisbet, . . . . .	"	II	...	...	...
"	Andrew Robertson, . . . . .	"	II	...	...	...
"	John Charles Scott, . . . . .	Ireland,	I	...	...	...
"	Charles William Thomson, . . . . .	Scotland,	I	...	...	...
"	William Romaine Paterson, . . . . .	"	...	I	...	...
"	Charles Shirra Dougall, . . . . .	"	...	...	I	...
"	William Craig Henderson, . . . . .	"	...	...	I	...
"	John Macfarlane Forsyth, . . . . .	"	II	...	...	...
1895	William Gow, . . . . .	"	I	...	...	...
"	Joseph Ferguson M'Fadyen, . . . . .	"	I	...	...	...
"	Gavin Lang Pagan, . . . . .	"	...	I	...	...
"	William Anderson Lindsay, . . . . .	"	...	...	I	...
"	Thomas Nisbet, . . . . .	"	...	...	I	...
"	John Alexander Duke, . . . . .	"	...	II	...	...
1896	David Hodge Crawford, . . . . .	"	I	...	...	...
"	John Freeland Cunningham, . . . . .	"	II	...	...	...
"	John Girvan, . . . . .	"	II	...	...	...
"	James M'Murtrie, . . . . .	"	II	...	...	...
"	James Slater Dunlop, . . . . .	"	...	...	II	...
"	William Morrison, . . . . .	"	...	II	...	...
"	Samuel Harvey M'Ewing, . . . . .	"	...	II	...	...
"	Alexander Smith, . . . . .	"	...	II	...	...
"	John Miller, . . . . .	"	...	...	I	...
1898	William John Saull, . . . . .	England,	...	II	...	...
1899	James Moffat, . . . . .	Scotland,	...	...	II	...



## MASTERS OF ARTS (M.A.).

Ordinances No. 11, Sections xi.-xv.; No. 44, Sections vi., viii.; No. 148, Sections ii., iii.; No. 160, Sections i.-iii.; No. 168, Section i. (1899).

		First Class.	Second Class.	Third Class.
1894	Henry Noel Brailsford, England,	Mental Philosophy.	Classics.	
1895	William Gregory Bell, do.,	Classics.		
	James Wallace Peck, Scotland,	Math. & Nat. Phil.		
	William King Gillies, do.,	Classics.		
1896	James Paterson Brander, do.,	Mental Philosophy.		
	John Maclean Ramsay, do.,	Classics.		
	Horace Fenton Wallace, do.,	Classics.		
	James Gillespie, do.,		Classics.	
	William Boyd, do.,	Mental Philosophy.		
	James Wilson Copeland, do.,	Math. & Nat. Phil.		
	Adam Bell Stewart, do.,	Math. & Nat. Phil.		
	George Donald Valentine, do.,	Math. & Nat. Phil.		
	Arthur West Wilkie, England,		Math. & N.P.	
	John Young, Scotland,		Math. & N.P.	
1897	George Stewart Adams, do.,	Classics.		
	Robert Daniels Bell, England,	Classics.		
	John W. Henderson, Scotland,	Classics.		
	Peter William Monie, do.,	Classics.		
	Marion M. Crichton, China,		Classics.	
	Alex. James Martin, Scotland,		Classics.	
	Thomas Neilson, do.,		Classics.	
	Allan Gibson, do.,			Classics
	Thomas Ellis Jones, Wales,	Mental Philosophy.		
	David Stevenson, Scotland,			English.
	William M. R. Pringle, "	History.	Classics.	
	Gavin Scott, "	History.	Classics.	
	Adam Hamilton, "	Classics.		
	James William Baird, "		Classics.	
	Grace Foulis Hay, "		Classics.	
	William N. Raeburn, "		Classics.	
	Andrew Boyd Scott, "	Mental Philosophy.		
	John Scoular Thomson, "	Mental Philosophy.		
	Alex. McCallum Scott, "			(Ment. Phil)
	James Campbell Ker, "	Math. & Nat. Phil.		
	William Wylie Fulton, "		English.	
	Richard R. Williams, Wales,			English.
1898	John Lyle Morison, Scotland,	(History. English.)		
	William H. Begg, "	Classics.		
	David L. Blair, "	Classics.		
	John Harvey, "	Classics.		
	Dorothy N. T. Murray, "		Classics.	
	Constance Tannahill, England,			Classics.
	Alexander A. Gardner, Scotland,	Math. & Nat. Phil.		
	James E. Henderson, "		Math. & N.P.	
	Wm. Fulton (Uddingston), "	Classics.	Math. & N.P.	

		First Class.	Second Class.	Third Class.
1898	Eliz. Pettigrew Taylor, Scotland,	Math. & Nat. Phil.	English.	{ Classics, M. Phil.
"	William Longmore Parkin, "	Classics.	"	
"	Robert M'Ewan, "	Classics.	"	Classics.
"	Helen Rutherford, "	Classics.	"	
"	William Fulton (Glasgow), "	"	Classics.	Classics.
"	William Henderson Love, "	"	Classics.	
"	Alexander Auchinachie, "	"	"	Classics.
"	And. James Campbell Kerr, "	"	"	
"	Hugh Reid Buchanan, "	Mental Philosophy.	"	Classics.
"	David H. Tweeddale, "	Mental Philosophy.	"	
"	Robert Candlish, "	"	Ment. Phil.	Ment. Phil.
"	Robert John Tainsh Bell, "	Math. & Nat. Phil.	"	
"	Thomas Pullar, . . . "	Math. & Nat. Phil.	"	M. & N.P.
"	Joseph White, . . . "	Math. & Nat. Phil.	"	
"	Hugh Brown, . . . "	"	Math. & N.P.	M. & N.P.
"	Peter Lowson, . . . "	"	Math. & N.P.	
"	John Jeffrey, . . . "	"	"	English.
"	Helen Margaret Rule, "	English.	"	
"	Henry Murphy, . . . "	"	English.	English.
"	Henry Givan Webber, "	"	"	
1899	Samuel F. H. Mackay, "	Classics.	"	M. Lang
"	Archibald Main, . . . "	Mental Philosophy.	"	
"	John Edgar, . . . "	English.	"	Classics
"	Maude Gertrude May, England,	English.	"	
"	Alexander D. Lindsay, Scotland,	"	Classics.	M. Lang
"	Charles G. McIlravey, Ireland,	"	Classics.	
"	Gordon B. Nielson, Scotland,	"	English.	M. Lang
"	Jessie Lyon Gilchrist, "	"	Mod. Lang.	
"	Minnie Louise Arthur, "	"	"	Classics
"	David M. Stewart, . . . "	Math. & Nat. Phil.	"	
"	John Lochhead, . . . "	English.	History.	Classics
"	Ritchie Girvan, . . . "	English.	"	
"	John Anderson, . . . "	"	{ Classics, Math. & N.P.	Classics
"	William A. Edward, . . . England,	Classics.	"	
"	James Sheridan, . . . Scotland,	Classics.	"	Classics
"	James McClelland, . . . "	"	Classics.	
"	James Faulds, . . . "	"	"	Math. & N.P.
"	Arch. M. Maemillan, B.Sc., "	Math. & Nat. Phil.	"	
"	David K. Picken, . . . "	Math. & Nat. Phil.	"	Math. & N.P.
"	Robert W. Stewart, . . . "	"	"	
"	Katharine T. McMillan, "	English.	"	Classics.
"	George Ogilvie, . . . "	English.	"	
"	Janet Spens, . . . "	English.	"	Classics.
1900	Mabel Atkinson, . . . England,	Mental Philosophy.	"	
"	George H. Stevenson, Scotland,	Classics.	"	Classics.
"	Robert B. Carslaw, . . . "	Math. & Nat. Phil.	"	
"	Peter Ramsay, . . . "	Math. & Nat. Phil.	"	Classics.
"	James Jack, . . . "	"	"	
"	Norman R. Mitchell, . . . "	"	Classics.	Ment. Phil.
"	Matthew Babington, . . . "	"	"	
"	Peter Lowe, B.Sc., . . . "	"	Math. & N.P.	

			First Class.	Second Class.	Third Class.
1900	Winifred Boyd, . . . India,	. . . . .	English.		
"	Margaret G. Fulton, . Scotland,	. . . . .	Mod. Lang.		
"	James Johnston, . . . do.,	Mental Philosophy.			
"	Alex. B. Mackay, . . . do.,	Mental Philosophy.			
"	Alexander Montgomerie, . do.,	Mental Philosophy.	<sup>1</sup> History.		
"	David G. Taylor, . . . do.,	Math. and Nat. Phil.			
"	Margaret L. Anderson, . do.,	<sup>2</sup> Classics.			
"	Peter George Smith, . . do.,	English.			
"	John Charles Mann, . . England,	. . . . .	Ment. Phil.		
"	Roderick M. Nicol, . . Scotland,	. . . . .	Math. & N. P.		
"	James Miller Clark, . . do.,	. . . . .	Math. & N. P.		
1901	James F. Dyer, . . . Japan,	Classics.			M. & N. P.
"	Peter Hatley Waddell, Singapore,	<sup>1</sup> Economic Science.			
"	Francis P. H. Stirling, . Scotland,	Classics.			
"	Hugh Watt, . . . do.,	Math. and Nat. Phil.			
"	Marion K. Binnie, . . . do.,	English.			
"	William H. Buchan, . . do.,	Modern Languages.			
"	Owen L. Jones, . . . Wales,	. . . . .	Classics.		
"	Thomas R. M'Murtrie, . Scotland,	. . . . .	Classics.		
"	Alexander Russell, . . do.,	. . . . .	Classics.		
"	Andrew M'Kerral, . . do.,	. . . . .	Math. & N. P.		
"	Arthur S. Hutchison, . do.,	. . . . .			Classics.
"	<sup>3</sup> Thomas Jones, . . . do.,	Economic Science.			
"	Dougald B. M'Quistan, . do.,	Math. and Nat. Phil.	Classics.		
"	Stewart N. Miller, . . do.,	Classics.			
"	Charles A. Young, . . do.,	English.			
"	Stanley H. Turner, . . England,	Economic Science.			
"	John J. Gemmell, . . . Scotland,	. . . . .	Classics.		
"	Thomas Graham, . . . do.,	. . . . .	Classics.		
"	Jas. G. MacDonald, Br. Cen. Africa,	. . . . .	Classics.		
"	James Moyes, . . . . Scotland,	. . . . .	Classics.		
"	William R. Wiseman, . do.,	. . . . .	Ment. Phil.		
"	James N. Stirling, . . do.,	. . . . .	Math. & N. P.		
"	Catherine Bennie, . . do.,	. . . . .	Mod. Lang.		
"	James H. Steel, . . . do.,	. . . . .	Econ. Sc.		
1902	Margaret A. Scott, . . do.,	Modern Languages.			
"	James M'Nabb, . . . do.,	. . . . .	Math. & N. P.		
"	Helen M. Armour, . . do.,	. . . . .	English.		
"	Alexander Mackinnon, . do.,	. . . . .	English.		
"	Edith M. Lindsay, . . do.,	. . . . .	History.		
"	<sup>4</sup> Frederick Mort, . . . do.,	. . . . .			M. & N. P.
"	<sup>4</sup> John Patterson, . . do.,	English.			
"	<sup>5</sup> Christian Pettigrew Home } do.,	. . . . .	Mod. Lang.		
"	Morton, . . . . }	. . . . .	English.		
"	<sup>5</sup> Malcolm MacAlister, . . do.,	. . . . .			
"	<sup>5</sup> John Macdonald Richardson, do.,	. . . . .			Ec. Sc.

<sup>1</sup> Postgraduate Honours in Oct., 1901.<sup>2</sup> Postgraduate Honours in April, 1901.<sup>3</sup> Took the Ordinary Degree in Nov., 1900.<sup>4</sup> Took the Ordinary Degree in April, 1900.<sup>5</sup> Took the Ordinary Degree in April, 1901.

		First Class.	Second Class.	Third Class.
1902	Wm. Lindsay Thompson, Scotland,	Math. and Nat. Phil.	Classics.	
"	William Holms Coats, . do.,	Classics.		
"	Robert Kerr Goodfellow, . do.,	Classics.		
"	John MacInnes, . . do.,	Classics.		
"	Eric James Roberts, . England,	Mental Philosophy.		
"	Robert Alex. Houston, Scotland,	Math. and Nat. Phil.		
"	Mary Clow Cameron, . do.,	Modern Languages.		
"	George Stewart, . . do.,	History.		
"	George Douglas Reith, . do.,	. . . . .	Classics.	
"	Archie Duncan Thomson, . do.,	. . . . .	Mental Phil.	
"	Oliver Dryer, . . . do.,	. . . . .	Mental Phil.	Classics.
"	John Gordon, . . . do.,	. . . . .	Classics.	
"	John Orr, . . . . do.,	. . . . .	Classics.	
"	Frank William Saunders, . do.,	. . . . .	Classics.	
"	Margaret Hay Livingston, . do.,	. . . . .	Math. & N.P.	
"	John Henderson Stewart, . do.,	. . . . .	Math. & N.P.	
"	Maggie Chalmers, . . do.,	. . . . .	Mod. Lang.	
"	Robert Miller, . . . do.,	. . . . .		M. & N.P.
"	Peter MacMillan, . . do.,	. . . . .		History.
1903	George Stuart Gordon, . do.,	Classics.		
"	Archibald Lang, . . . do.,	Math. and Nat. Phil.		
"	James Hamilton Lindsay, . do.,	Math. and Nat. Phil.		
"	John Reid Cameron, . . do.,	English.		
"	Mary Emilie Thomson, . do.,	Modern Languages.		
"	George Beaumont, . . England,	. . . . .	Classics.	
"	Jas. Aitchison Milligan, Scotland,	. . . . .	Classics.	
"	Matthew Stewart, . . . do.,	. . . . .	Classics.	
"	Harold Wilson, . . . do.,	. . . . .	Classics.	
"	<sup>1</sup> Alexander Borland, . . do.,	. . . . .	Mental Phil.	
"	Muriel Giffen Lindsay, . do.,	. . . . .	Math. & N.P.	
"	William McNaught, . . do.,	. . . . .	Math. & N.P.	
"	<sup>1</sup> John Laing Kinloch, . do.,	. . . . .	English.	
"	Charles McKee Wright, . Ireland,	. . . . .		Classics.
"	James Campbell Muir, Scotland,	. . . . .		M. & N.P.
"	Wm. Scott Branks Wilson, . do.,	. . . . .		M. & N.P.
"	William Sutherland, . . do.,	Math. and Nat. Phil.	History.	
"	Robert R. Rusk, . . . do.,	Mental Philosophy.		
"	John W. Scott, . . . do.,	Mental Philosophy.		
"	<sup>2</sup> William A. Campsie, . . do.,	Math. and Nat. Phil.		
"	Samuel N. Forrest, . . do.,	Math. and Nat. Phil.		
"	Robert Hamilton, . . . do.,	Math. and Nat. Phil.		
"	Robert Jack, . . . . do.,	Math. and Nat. Phil.		
"	William Miller, . . . . do.,	Math. and Nat. Phil.		
"	Mary C. Bigger, . . . . do.,	Modern Languages.		
"	Janet Green, . . . . South Africa,	Modern Languages.		
"	Alice M. B. Guthrie, . Scotland,	Modern Languages.		
"	Robert W. Barr, . . . do.,	. . . . .	Classics.	
"	Peter Marshall, . . . do.,	. . . . .	Classics.	
"	Alexander Moffat, . . . do.,	. . . . .	Classics.	
"	James H. Stevenson, . Canada,	. . . . .	Classics.	
"	Robert M. Morison, . . Scotland,	. . . . .	Math. & N.P.	

<sup>1</sup> Took the Ordinary Degree in April, 1901.<sup>2</sup> Took the Ordinary Degree in April, 1902.

			First Class.	Second Class.	Third Class.
1903	<sup>1</sup> Daniel Gillies, . . . Scotland,		. . . .	English.	
"	Mary Barrowman, . . . do.,		. . . .	Mod. Lang.	
"	Robert Cunningham, . . . do.,		. . . .	. . . .	Classics.
"	Harry J. Phillips, . . . do.,		. . . .	. . . .	Classics.
"	<sup>2</sup> James Hunter, . . . do.,		. . . .	. . . .	M. & N.P.
"	<sup>3</sup> Peter M'Dougall, . . . do.,		. . . .	. . . .	English
1904	James M. Devine, . . . do.,		Classics.		
"	William Manson, . . . do.,		Classics.		
"	Charles G. Nelson, . . . do.,		Classics.		
"	Annie Jane Arnett, . . . do.,		Modern Languages.		
"	Elizabeth W. Scott, . . . do.,		Modern Languages.		
"	William J. Auld, . . . do.,		. . . .	Classics.	
"	Adam Patriek, . . . do.,		. . . .	Classics.	
"	Arthur Shepherd, . . . do.,		. . . .	Classics.	
"	<sup>2</sup> John Hutcheson, . . . do.,		. . . .	English.	
"	Arthur Craig, . . . England,		. . . .	Mod. Lang.	
"	James P. Mackay, . . . Scotland,		. . . .	. . . .	M. & N.P.
"	Robert Burns (Larkhall), . . . do.,		History.	. . . .	M. & N.P.
"	Alexander Pender Crichton, do.,		Mental Philosophy.		
"	Robert Nicol Cross, . . . do.,		Mental Philosophy.		
"	Robert Alex. Cameron } do.,		Mental Philosophy.		
"	Macmillan, . . . }				
"	Harold Charles Rowse, England,		Mental Philosophy.		
"	George Green, . . . Scotland,		Math. and Nat. Phil.		
"	John Miller (Beith), . . . do.,		Math. and Nat. Phil.		
"	John Ferguson Tinto, . . . do.,		Math. and Nat. Phil.		
"	James Robertson Buchanan, do.,		Semitic Languages		
"	Robert Dewar, . . . England,		English.		
"	Theodore Douglas Dunn, Scotland,		English.		
"	Ida Macgregor Gordon, . . . do.,		Modern Languages.		
"	Annie Glenday Philip, . . . do.,		Modern Languages.		
"	<sup>4</sup> Margaret T. Robertson, . . . do.,		History.		
"	Donald Carswell, . . . do.,		. . . .	Classics.	English.
"	William Tod Ritchie, . . . do.,		. . . .	History.	Classics
"	John M'Bryde, . . . do.,		. . . .	Classics.	
"	John MacLean (Wishaw), . . . do.,		. . . .	Classics.	
"	William Paterson, . . . do.,		. . . .	Ment. Phil.	
"	Robert Browning, . . . do.,		. . . .	Math. & N.P.	
"	David Auchinvoile Dick, . . . do.,		. . . .	Math. & N.P.	
"	Robert Harvie, . . . do.,		. . . .	Math. & N.P.	
"	Thomas David King Murray, do.,		. . . .	Math. & N.P.	
"	David Bryan, . . . do.,		. . . .	English.	
"	James Hutchison Cockburn, do.,		. . . .	English.	
"	William MacDougall, . . . do.,		. . . .	English.	
"	Alice Annie Lumsden } do.,		. . . .	English.	
"	Malcolm, . . . }				
"	Isabella Wilson, . . . do.,		. . . .	Mod. Lang.	
"	<sup>1</sup> Andrew Henderson, . . . do.,		. . . .	Math. & N.P.	
"	Jane Helen Ross, . . . do.,		. . . .	. . . .	M. & N.P.
"	Margarette C. Paterson, . . . do.,		. . . .	. . . .	English.

<sup>1</sup> Took the Ordinary Degree in April, 1901.<sup>2</sup> Took the Ordinary Degree in April, 1903.<sup>3</sup> Took the Ordinary Degree in April, 1900.<sup>4</sup> Took the Ordinary Degree in April, 1902.

		First Class.	Second Class.	Third Class.
1904	Douglas H. Wilson, . Scotland,			History.
1905	John Rankine Brown, . do.,	Classics.		
"	Charles Geo. G. Helme, . do.,	Classics.		
"	Walter M. MacCulloch, . do.,	Classics.		
"	William Salmond Stewart, do.,	Classics.		
"	Janet Isabel Macphail, . do.,	Modern Languages.		
"	Flora Ritchie, . . . do.,	Modern Languages.		
"	James Edward Scott, . do.,		Classics.	
"	James Mathie Barclay, . do.,		History.	
"	John Jarvie Dempster, . do.,		Classics.	
"	Robert Hellier Napier, . do.,		Classics.	
"	Charles Eadie Park White, do.,		Classics.	
"	James Mair Frew, . . do.,		Math. & N.P.	
"	Andrew Hutchison, . . do.,		Math. & N.P.	
"	James Adam McHarg, . do.,		Math. & N.P.	
"	Christian Ewen, . . . do.,		English.	
"	<sup>1</sup> William Ferguson, . . do.,		English.	
"	Clarence James Vincent, . do.,			Classics.
"	Wm. Isaac Hutcheon Marr, do.,			History.
"	<sup>2</sup> Andrew C. Baird, . . do.,			M. & N.P.
"	Kenneth Stewart, . . do.,		Classics.	M. & N.P.
"	James Carrick Miller Fairlie, do.,	Classics.		
"	Constance Helen . . . } India, {	Semitic Languages.		
"	Margaret Archibald, } {	Modern Languages.		
"	<sup>4</sup> Albert Frederick . . . } England, {	Economic Science.		
"	Lucas Brayne, . . . } {	Classics.		
"	Archibald A. Bowman, Scotland,	Mental Philosophy.	Classics.	
"	Neil McArthur, . . . do.,	Math. and Nat. Phil.		
"	Thomas Murray MacRobert, do.,	Math. and Nat. Phil.		
"	Leonard James Russell, England,	Math. and Nat. Phil.		
"	George Duncan . . . } British	Math. and Nat. Phil.		
"	Campbell Stokes, . . } Guiana,			
"	Isabel Margaret Milligan, Scotland,	English.		
"	Annie Murray Macgregor, do.,	Modern Languages.		
"	William Buchan Donald, . do.,		Classics.	
"	Mary Scott Mackenzie, . do.,		Math. & N.P.	
"	Tennant Sloan, . . . do.,		Classics.	
"	Henry Martyn Trafford, England,		Classics.	
"	Donald Macphie, . . . do.,		Ment. Phil.	
"	John Purdie, . . . do.,		Math. & N.P.	
"	Richard Murray, . . . do.,		Math. & N.P.	
"	Dugald Ferguson Percy, . do.,		English.	
"	<sup>1</sup> David Brown Mungo, . do.,		English.	
"	<sup>3</sup> George Frank Clark, . do.,		History.	
1906	Gilbert Pitcairn Hogg, . do.,	Economic Science.		English.
"	Janey Aitken Keddie, . do.,	Modern Languages.	Math. & N.P.	

<sup>1</sup>Took the Ordinary Degree in April, 1902.<sup>3</sup>Took the Ordinary Degree in April, 1904.<sup>2</sup>Took the Ordinary Degree in April, 1903.<sup>4</sup>Took the Ordinary Degree in April, 1905.

		First Class,	Second Class,	Third Class,
1906	Mary M. Waddington, England.	Modern Languages.		
"	Thomas Logan Douglas, . do.,	. . . . .	Classics.	English.
"	Oswald James Gardner, . do.,	. . . . .	Classics.	
"	Alexander Colquhoun Grant, do.,	. . . . .	Classics.	
"	Elton Lawrence Gueritz, . do.,	. . . . .	Classics.	
"	Elias Henry Jones, . . . Wales,	. . . . .	Classics.	
"	<sup>1</sup> John M'Phee, . . . . Scotland,	. . . . .	Classics.	
"	Euphemia W. Sutherland, do.,	. . . . .	Classics.	
"	James M'Arthur, . . . do.,	. . . . .	English.	
"	Elizabeth Alexander Forrest, do.,	. . . . .	Mod. Lang.	
"	William Angus Munro, . do.,	. . . . .	Mod. Lang.	
"	Annie Stewart Robertson, do.,	. . . . .	Mod. Lang.	
"	Joan Dorothea Hughes, England,	. . . . .		English.
"	Thomas Beaumont, . . do.,	Modern Languages.	Classics.	
"	Eliz. Gillies Morison, . Scotland,	Math. & Nat. Phil.		
"	David Norman Strathie, . do.,	Math. & Nat. Phil.		
"	James Keith, . . . do.,	History.		
"	<sup>2</sup> Henry Glassford Bell Spens, do.,	History.		
"	Adam Wilson Burnet, . do.,	. . . . .	Classics.	
"	James Carmichael, . . do.,	. . . . .	Classics.	
"	James Dunlop } Straits	. . . . .	Classics.	
"	Paterson, . . } Settlements,	. . . . .		
"	Wm. Gillan Waddell, Scotland,	. . . . .	Classics.	
"	Joseph Cupples, . . . do.,	. . . . .	Ment. Phil.	
"	George Robert Robertson, do.,	. . . . .	Ment. Phil.	
"	Alfred Ingram Steven, . do.,	. . . . .	Math. & N.P.	
"	Octavia Jane Ronald } do.,	. . . . .	English.	
"	Bennett, . . . . .	. . . . .		
"	<sup>3</sup> Charles Cullen, . . . do.,	. . . . .	English.	
"	<sup>3</sup> Wm. Scott (Stonehouse), . do.,	. . . . .	English.	
"	<sup>3</sup> Arthur Esdaile Mac- } America,	. . . . .	Economic Sc.	
"	gregor, . . . . .	. . . . .		
"	Wilfred Gerald Maclean, England,	. . . . .		Classics.
"	<sup>4</sup> Ian Darroch Neilson, . Scotland,	. . . . .		M. Phil.
"	Hugh Smith, . . . do.,	. . . . .		M. & N.P.
"	James Williamson, . . do.,	. . . . .		M. & N.P.
"	<sup>3</sup> John Lambie, . . . do.,	. . . . .		M. & N.P.
1907	John Hamilton Maxwell, . do.,	Classics.		
"	William Morton Ogilvy, . do.,	Classics.		
"	John Carter Rollo, . . do.,	Classics.		
"	Francis Mackenzie } England,	Classics.		
"	Smith, . . . . .	. . . . .		
"	William M'Kelvie, . . Scotland,	Mental Philosophy.		
"	<sup>4</sup> John Bennett Black, . do.,	English.		
"	<sup>4</sup> Elsie Frame Macdonald, . do.,	English.		
"	Mary Fullarton Armour, . do.,	Modern Languages.		
"	Mungo Tennent Archibald, do.,	. . . . .	Classics.	
"	James Ballantyne, . . do.,	. . . . .	Classics.	
"	John Charles Watson, . do.,	. . . . .	Classics.	
"	James Robert Brown, . do.,	. . . . .	Math. & N.P.	
"	Finlay M'Culloch, . . do.,	. . . . .	Math. & N.P.	

<sup>1</sup>Took the Ordinary Degree in April, 1903.<sup>2</sup>Took the Ordinary Degree in November, 1905.<sup>3</sup>Took the Ordinary Degree in April, 1904.<sup>4</sup>Took the Ordinary Degree in April, 1905.

## BACHELORS OF SCIENCE (B.Sc.).

(O.R.)

		<i>Honours.</i>	
		Natural Science.	Engineering Science.
1879	Robert F. Muirhead, C.E., Scotland,	. . . . .	Math. & Nat. Phil. 11
1882	John Cleland, C.E., . do.,	. . . . .	Math. & Nat. Phil. 11
1883	John McCowan, C.E., . do.,	. . . . .	Math. & Nat. Phil. 11
1884	William Weir, . . do.,	. . . . .	Math. & Nat. Phil. 11
	James C. Todd, . . India,	Math. & Nat. Phil. 11	
1886	Lawrence Crawford, . Scotland,	. . . . .	Math. & Nat. Phil. 1
1887	Angus McLean, . . do.,	. . . . .	Math. & Nat. Phil. 11
1890	James Stanley Muir, . do.,	Chemistry.	
	Robert Watson Smith, . do.,	Chemistry.	
1891	James Fenwick, . . Australia,	. . . . .	Civil Engineering.
	Robert Main, . . . Scotland,	Chemistry.	
	Robert Muir Ferrier, . do.,	. . . . .	Civil Engineering.
1892	John Dewar Cormack, . do.,	. . . . .	Math. & Nat. Phil. 1
			Civil Engineering.
	Jas. Blacklock Henderson, do.,	. . . . .	Math. & Nat. Phil. 1
			Civil Engineering.
	James Rankin, . . . do.,	Zoology and Botany.	
	William S. Cook, . . do.,	Physiology.	
	David R. Boyd, . . . do.,	Chemistry.	
1893	James C. Robertson, M.A., do.,	Anat. and Physiol.	
1894	Charles Forbes, . . . do.,	. . . . .	Civil Engineering.
	Wm. Henry Laing, . . England,	Botany and Zoology.	
	George Wm. Shearer, . Ireland,	. . . . .	Civil Engineering.
1895	Wm. Craig Henderson, . Scotland,	. . . . .	Math. & Nat. Phil. 1
	Hugh Calderwood, . do.,	Anat. and Physiol.	
	John Allan Craigie Macewen, do.,	Anat. and Physiol.	
	William Hamilton, . . do.,	. . . . .	Civil Engineering.
	Campbell Macmillan, . do.,	. . . . .	Civil Engineering.
	Thomas Hunter, M.A., . do.,	Anat. and Physiol.	
	William Martin, M.A., . do.,	Anat. and Physiol.	
1896	William S. Templeton, M.A., do.,	. . . . .	Math. & Nat. Phil. 1
	Peter L. L. Craig, M.A., . do.,	Anat. and Physiol.	

## BACHELORS OF SCIENCE (PURE SCIENCE).

Ordinance No. 12, Section ix. (1889).

		<i>Subjects of Final Examination.</i>		
1898	John Pinkerton Duncan, . . .	Anatomy.	Physiology.	Zoology.
	Ruth Pirret, . . . . .	Mathematics.	Chemistry.	Physiology.
	Daisy Annabella Murdoch Clark,	Physiology.	Zoology.	Botany.
	William Anderson Lindsay, M.A.,	Mathematics.	Nat. Phil.	*Astronomy.
	Allan Martin, M.A., . . .	Anatomy.	Physiology.	Zoology.
1899	Robert John Tainsh Bell, M.A.,	*Mathematics.	*Nat. Phil.	*Astronomy.
	Robert Macfarlane Clark, . .	*Mathematics.	*Nat. Phil.	Chemistry.

\* The asterisks indicate Special Distinction in the subjects to which they are prefixed.



*Subjects of Final Examination.*

1899	William Anderson, . . .	*Mathematics.	*Nat. Phil.	*Astronomy.	
"	James Slater Dunlop, M.A., .	Mathematics.	Nat. Phil.	Astronomy.	
"	Robert William Stewart, . .	*Mathematics.	*Nat. Phil.	Chemistry.	
"	Robert George White, M.A., .	Anatomy.	Physiology.	Zoology.	
1900	Gertrude Dorman Bostock, . .	Anatomy.	Physiology.	Zoology.	
"	Kate Fraser, . . .	Anatomy.	*Physiology.	Zoology.	
"	William Fulton, M.A., . . .	*Mathematics.	Nat. Phil.	*Astronomy.	
"	William Boyd, M.A., . . .	Chemistry.	Geology.	Zoology.	
"	Joseph White, M.A., . . .	*Mathematics.	*Nat. Phil.	Anatomy.	Physiology.
1901	James Miller Clark, M.A., . .	Mathematics.	Nat. Phil.	*Astronomy.	
"	James Alex. Russell Henderson,	Mathematics.	Chemistry.	Geology.	
"	Ivy M'Kenzie, M.A., . . .	Anatomy.	Physiology.	Zoology.	
"	Alexander Matheson, M.A., . .	Anatomy.	Physiology.	Zoology.	
"	Alexander Wood, . . .	Mathematics.	Nat. Phil.	*Astronomy.	
"	Robert Donald, . . .	Chemistry.	Geology.	Zoology.	
"	Malcolm Hutton, M.A., . . .	Anatomy.	Physiology.	Zoology.	
"	William Hyslop, M.A., . . .	*Mathematics.	*Nat. Phil.	Geology.	
"	Jane Hamilton M'Iloy, M.A., .	Physiology.	Zoology.	Botany.	
"	John Muir, . . .	Anatomy.	Physiology.	Geology.	
1902	Frederick Mort, M.A., . . .	Mathematics.	Nat. Phil.	Geology.	
"	George Goldie Smith, . . .	Anatomy.	Physiology.	Zoology.	
"	Alfred Walter Stewart, . . .	Mathematics.	Chemistry.	Geology.	
"	David James M'Leish, M.A., .	Anatomy.	Physiology.	Zoology.	
"	Berkeley Hope Robertson, M.A.,	Physiology.	Geology.	Zoology.	
1903	John Graham, . . .	Chemistry.	Anatomy.	Physiology.	
"	Robert Irvine, M.A., . . .	Mathematics.	Astronomy.	Geology.	
"	Jessie Deans Rankin, M.A., .	Anatomy.	*Physiology.	Zoology.	
"	Wm. Lindsay Thompson, M.A.,	*Mathematics.	*Nat. Phil.	Geology.	
"	Thomas Barbour, . . .	Mathematics.	Nat. Phil.	Physiology.	
"	Robert A. Houston, M.A., . .	*Mathematics.	*Nat. Phil.	*Astronomy.	
"	Thomas M'Criek, M.A., . . .	Geology.	Zoology.	Botany.	
"	Dougald B. McQuistan, M.A., .	*Mathematics.	*Nat. Phil.	Astronomy.	
"	John H. Stewart, M.A., . . .	Mathematics.	Nat. Phil.	Astronomy.	
1904	John Anderson, M.A., . . .	Physiology.	Geology.	Zoology.	
"	John Campbell, . . .	Mathematics.	Nat. Phil.	Chemistry.	
"	Samuel N. Forrest, M.A., . .	*Mathematics.	*Nat. Phil.	Chemistry.	
"	Sampachi Fukuzawa, . . .	Mathematics.	Nat. Phil.	Chemistry.	
"	Louis Niel Gow, M.A., . . .	Mathematics.	Nat. Phil.	Chemistry.	
"	John Isdale Greig, M.A., . .	Anatomy.	Physiology.	Botany.	
"	James Hunter, M.A., . . .	Mathematics.	Nat. Phil.	Astronomy.	
"	Harry S. Hutchison, . . .	Chemistry.	Anatomy.	Physiology.	
"	Margaret Barbour, M.A., . .	*Physiology.	Geology.	Botany.	
"	David Stewart Brunton, M.A., .	Mathematics.	Chemistry.	Geology.	
"	Archibald Lang, M.A., . . .	*Mathematics.	*Nat. Phil.	Astronomy.	
"	William Miller, M.A., . . .	*Mathematics.	*Nat. Phil.	*Astronomy.	
"	Peter Ramsay, M.A., . . .	*Mathematics.	*Nat. Phil.	Geology.	
1905	David Arthur, . . .	Anatomy.	*Physiology.	Zoology.	
"	Andrew Cumming Baird, M.A.,	Mathematics.	Nat. Phil.	Geology.	
"	<sup>1</sup> Alexander Graham, . . .	Anatomy.	Geology.	Zoology.	
"	Thomas Dingwall Mackenzie, .	Chemistry.	Physiology.	Geology.	
"	William Pettigrew M'Pherson, .	Chemistry.	Physiology.	Geology.	

<sup>1</sup> Graduated B.Sc. in Agriculture, 1902.

\*The asterisks indicate Special Distinction in the subjects to which they are prefixed.

<i>Subjects of Final Examination.</i>					
1905	Kathleen Mary Nolan, . . .	*Physiology.	Zoology.	Botany.	
..	Wm. Richard Wiseman, M.A., . . .	Chemistry.	*Physiology.	Geology.	
..	William Brown, M.A., . . .	Anatomy.	Physiology.	Zoology.	
..	James Mair Frew, M.A., . . .	*Mathematics.	Nat. Phil.	Astronomy.	
..	Thos. Murray MacRobert, M.A., . . .	*Mathematics.	*Nat. Phil.	Astronomy.	
..	John Clark Middleton, M.A., . . .	Anatomy.	Physiology.	Zoology.	
..	James Moyes, M.A., . . .	Chemistry.	Geology.	Botany.	
..	Thos. David King Murray, M.A., . . .	Mathematics.	Nat. Phil.	Astronomy.	
..	Ralph Montgomery F. Picken, . . .	Anatomy.	Physiology.	*Zoology.	
..	John Purdie, M.A., . . .	Mathematics.	Nat. Phil.	Astronomy.	
..	Jane Helen Ross, M.A., . . .	Mathematics.	Nat. Phil.	Botany.	
..	Geo. D. Campbell Stokes, M.A., . . .	*Mathematics.	*Nat. Phil.	Chemistry.	
1906	John Fotheringham, . . .	Anatomy.	Physiology.	*Zoology.	
..	Robert Hamilton, M.A., . . .	*Mathematics.	*Nat. Phil.	Astronomy.	
..	Robert Jack, M.A., . . .	*Mathematics.	*Nat. Phil.	*Astronomy.	
..	Neil McArthur, M.A., . . .	*Mathematics.	*Nat. Phil.	*Astronomy.	
..	John Stewart, M.A., . . .	Anatomy.	Physiology.	*Zoology.	
..	David Thomson, M.A., . . .	Mathematics.	*Chemistry.	Geology.	
..	Helen M. Armour, M.A., Scot., . . .	Geology.	Zoology.	Botany.	
..	John Henry Brightman, Eng'd., . . .	Mathematics.	Nat. Phil.	Geology.	
..	Alfred Davidson, Scotland, . . .	Mathematics.	Nat. Phil.	*Chemistry.	
..	Andrew Donald, M.A., do., . . .	Chemistry.	Geology.	Botany.	
..	John Frew, M.A., do., . . .	Mathematics.	*Chemistry.	Geology.	
..	Andrew Henderson, M.A., do., . . .	Mathematics.	Nat. Phil.	Astronomy.	Chemistry.
..	John Miller, M.A., do., . . .	*Mathematics.	*Nat. Phil.	*Astronomy.	
1907	George Green, M.A., do., . . .	*Mathematics.	*Nat. Phil.	Astronomy.	

\*The asterisks indicate Special Distinction in the subjects to which they are prefixed.

## BACHELORS OF SCIENCE (ENGINEERING).

Ordinance No. 23, Section xiii. (1889).

The *Italics* denote Graduates on the Naval Architecture side.

		<i>With Special Distinction in</i>
1895	<i>Daniel Chaplin Nutting.</i>	
..	Adam Gowans Whyte.	
1896	Oliver Styles.	
..	James Muir, . . .	(Engineering and Drawing. Astronomy and Geodesy.
1897	John Frederick Black.	
..	James Henry Grieve.	
..	Peter Lowe.	
1898	Andrew Dunn.	
..	James Weir French.	
..	<i>James Paton.</i>	

		<i>With Special Distinction in</i>
1898	Owen Richard Williams.	
„	Archibald Morven Macmillan, . . .	{ Mathematics. Natural Philosophy. Engineering and Drawing.
„	Hugh Wallace, . . . . .	{ Mathematics. Engineering and Drawing.
„	Hugh Munro.	
„	John Warrack.	
1899	James Malcolm Bell.	
„	Hjalmar Berg.	
„	Andrew Marshall Downie.	
„	John Gordon Henderson.	
„	Stephen Hutchison.	
„	James Rae M'Intosh.	
„	John Steel Nicholson.	
„	David Robertson, . . . . .	{ Engineering and Drawing. Electricity—Pure and Applied.
1899	William Guthrie Strang, . . . .	{ Mathematics. Natural Philosophy. Engineering and Drawing. Geology and Mineralogy.
„	William Walker.	
„	William Renfrew Wilson.	
„	<i>Einar Bull.</i>	
„	<i>Charles Stuart Douglas.</i>	
„	George Alexander Inglis.	
„	William Henry Fullarton Murdoch.	
„	William Valentine Shearer.	
„	Archibald Craig Walker.	
1900	<i>John Hutchison Barbour.</i>	
„	Anthony Cathcart Coubrough, M.A.	
„	<i>Robert Morton Dyer.</i>	
„	<i>John Gavin Johnstone.</i>	
„	Charles Selby Lennox MacFarlane.	
„	<i>Hugh Millar MacMillan.</i>	
„	<i>James Vost.</i>	
„	Alexander Houston Weddell, . . .	{ Natural Philosophy. Engineering and Drawing. Electricity—Pure and Applied.
„	Archibald Leitch.	
„	John Nanscauwen Dawe.	
„	James Aitchison.	
„	William Henry Ballantyne, . . .	Electricity—Pure and Applied.
901	James Craig.	
„	John Francis Henderson.	
„	Carolus Marie.	
„	George Macmillan Young.	
„	William Bryson.	
„	Robert Thomson Neilson.	
„	James Neilson Stirling, . . . .	{ Mathematics. Natural Philosophy.
„	Andrew Hepburn Whitelaw.	
„	Alfred John Wilson, . . . . .	{ Mathematics. Engineering and Drawing.

		<i>With Special Distinction in</i>
1902	William George Burn.	
„	<sup>1</sup> James Miller Clark, M.A., . . . .	Astronomy and Geodesy.
„	John Fairley.	
„	John Clowes Fairlie.	
„	Thomas Macmillan Hunter, M.A., . .	Mathematics.
„	Duncan Robert MacLachlan, . . . .	Engineering Laboratory—Electrical.
„	Thomas Bonner Morley, . . . .	Mathematics.
„	James Muirhead, . . . .	Natural Philosophy.
„	James Valence Nimmo, . . . .	Engineering and Drawing.
„	Alexander Williamson.	Engineering and Drawing.
„	Robert Ernest Workman, . . . .	Engineering Laboratory—Electrical.
„	John Graham Young.	Natural Philosophy.
„	<i>William M'Gill Gray.</i>	
„	William Barnett Harvey.	
„	William Campbell Houston, . . . .	Engineering and Drawing.
„	Niel Boyd Macmillan.	Electricity—Pure and Applied.
„	John Findlay Muir.	
„	<i>William Frank Robertson.</i>	
„	Kouji Satow.	
„	Frederick Robert Stewart.	
1903	Hugh de Paynesley Birkett.	
„	William Henry Dorman Bostock.	
„	William Jackson Crawford.	
„	Thomas Grant Dempster.	
„	<i>James Black Dickie.</i>	
„	James Gordon Gray, . . . .	Mathematics.
„	Charles Henry Lobban.	Natural Philosophy.
„	Hugh Alexander Mackay.	Physical Laboratory.
„	Neil John Maclean, . . . .	Electricity—Pure and Applied.
„	John Martin, . . . .	Natural Philosophy.
„	Clive Macfarlane Primrose.	Engineering and Drawing.
„	Fryer Thomas Acheson Smyth.	Electricity—Pure and Applied.
„	<i>James Edward Steel.</i>	Engineering Laboratory—Electrical.
„	James Summers, . . . .	Physical Laboratory.
„	John Younger, . . . .	Engineering and Drawing.
„	James Gray, . . . .	Electricity—Pure and Applied.
„	Robert Blair.	Engineering Laboratory—Mechanical.
„	Robert Crichton.	Natural Philosophy.
„	Richard Frederick Hartley, . . . .	Physical Laboratory.
„	William Carrick Howat.	Electricity—Pure and Applied.

<sup>1</sup> Graduated B.Sc. in Pure Science, 1901.

		<i>With Special Distinction in</i>
1903	James Howden.	
"	John Alexander M'Crindle.	
"	John Ernest MacDougall.	
"	<i>John Alexander Gowans Twinnsh.</i>	
"	Henry Owen Weller	
1904	Bernard Inman Franklin Adams,	Physical Laboratory.
"	Robert Douglas Archibald, . . . . .	( Natural Philosophy.
"	Hubert Noel Beilby.	( Engineering and Drawing.
"	Robert Bilsland, . . . . .	Physical Laboratory.
"	<i>Ejnar Bondegaard,</i> . . . . .	Physical Laboratory.
"	John Brown.	
"	James Richardson Coats.	
"	Henry James Morrison Cousens,	( Mathematics.
"	George Mather Craig.	( Natural Philosophy.
"	Bernard Parker Haigh, . . . . .	( Physical Laboratory.
"	Harry Fairlie Hodge.	( Engineering and Drawing.
"	Duncan John Kerr, . . . . .	( Engineering Laboratory—Electrical
"	<i>Carlo La Torre.</i>	( Mathematics.
"	John Alexander MacConnell.	( Natural Philosophy.
"	John Maxwell Scott Maxwell.	( Engineering and Drawing.
"	Michael Spartali.	( Electricity—Pure and Applied.
"	Robert Ure, . . . . .	( Mathematics.
"	John Whitehead.	( Natural Philosophy.
"	Sidney Hartley.	
"	John M'Cance, . . . . .	( Physical Laboratory.
1905	<i>Frank Sower Barnwell.</i>	( Engineering and Drawing.
"	Robert Cuthbertson.	( Electricity—Pure and Applied.
"	Fredrick Habler Downie, . . . . .	( Mathematics.
"	John Christopher Dunlop.	( Natural Philosophy.
"	John Dobbie Halliday Dymock.	( Chemistry.
"	Philopemen Georgoussis.	( Physical Laboratory.
"	Alexander Hutchison, . . . . .	( Engineering and Drawing.
"		( Electricity—Pure and Applied.
"		( Mathematics.
"		( Natural Philosophy.
"		( Engineering and Drawing.
"		( Electrical Engineering.

		<i>With Special Distinction in</i>
1905	John Kerr.	
"	Alexander Lawrance.	
"	Thomas Muirhead, . . . . .	Natural Philosophy.
"	Alexander Norwell.	
"	John Thomson, . . . . .	{ Engineering and Drawing. Electrical Engineering. Mathematics. Natural Philosophy.
"	Matthew Graham Anderson, . . . . .	{ Physical Laboratory. Electrical Engineering. Engineering and Drawing.
"	James M'Gee Begg.	
"	<i>Alexander Chisholm, M.A.</i>	
"	<i>William Dawson.</i>	
"	Thomas Ellis.	
"	George Henry Forrest.	
"	Tomochika Iwane.	
"	John Kirkwood.	
"	James Macfadzean.	
"	Charles M'Neil.	
"	William George Yeaman.	
1906	Andrew Niven Aikman, . . . . .	Physical Laboratory.
"	Thomas Adams Andrew.	
"	Andrew Tudhope Clark, . . . . .	{ Natural Philosophy. Electrical Engineering.
"	James Alexander Cormack.	
"	William Campbell Crockett, . . . . .	Physical Laboratory.
"	William Francis Maxwell Donald.	
"	John Hyslop Gardner.	
"	<i>John Alexander Henderson.</i>	
"	Frederick Laurence Hislop.	
"	<i>Robert Gerard Addison Holmes.</i>	
"	<i>William Gilchrist Macbeth.</i>	
"	George Gordon Macfarlane.	
"	George Herbert Stevenson, . . . . .	{ Mathematics. Engineering and Drawing. Electricity—Pure and Applied.
"	William Hugh Young, . . . . .	{ Mathematics. Natural Philosophy.
"	George Pate, . . . . .	Electrical Engineering I.
1907	<i>Robert Allan,</i> . . . . .	Mathematics.
"	James Barr, . . . . .	{ Mathematics. Physical Laboratory. Engineering and Drawing.
"	Robert Boyle, . . . . .	{ Physical Laboratory. Geology and Mineralogy.
"	James Westhall Brown, . . . . .	{ Physical Laboratory. Electricity—Pure and Applied.
"	Henry Richmond Clinie, . . . . .	{ Natural Philosophy. Physical Laboratory.
"	Frank Stewart Easton, . . . . .	{ Physical Laboratory. Engineering and Drawing.
"	Alexander Gordon, . . . . .	{ Mathematics. Physical Laboratory.

		<i>With Special Distinction in</i>
1907	Hugh Jack, . . . . .	{ Mathematics. Physical Laboratory. Engineering and Drawing.
„	Alexander Macdonald, . . . . .	{ Natural Philosophy. Physical Laboratory. Electricity—Pure and Applied.
„	Alexander MacLaren, . . . . .	{ Physical Laboratory. Engineering and Drawing.
„	Thomas Baird Maxwell, . . . . .	{ Mathematics. Natural Philosophy. Physical Laboratory. Engineering and Drawing.
„	Alexander Sutherland Ritchie, . . . . .	{ Engineering III. Mathematics.
„	Charles Allison Taylor, . . . . .	{ Mathematics. Natural Philosophy.
„	William Thomson, . . . . .	{ Natural Philosophy.
„	Sebastian Greg Monteith Ure, . . . . .	{ Natural Philosophy. Physical Laboratory.

## DOCTORS OF MEDICINE (M.D.). (O.R.) HONOURS.

1845	Alexander Lindsay, Scotland.	1853	Richard Stanistreet, Ireland.
„	James Craigie Murray, do.	„	David Knox, do.
„	Francis Reynolds, Ireland.	1854	John Lindsay Stewart, Scotland.
„	John Brown, Scotland.	„	James Fraser Paton, do.
„	John Gardiner, do.	„	David Easton, Ireland.
„	Donald Cameron, Isle of Man.	1855	William Leishman, Scotland.
„	Adam Nicholson, Scotland.	„	William J. Lewis, New Brunswick.
„	John Duke, Ireland.	„	Alexander Robertson, Scotland.
1847	William Parry, Wales.	1857	Thomas Beaumont, Ireland.
„	Robert Livingstone, Scotland.	„	Joseph M. Fleming, Scotland.
„	Alexander B. Sharpe, do.	„	Maxwell Rodgers, Ireland.
1848	Charles H. Hitchen, England.	1858	John Couper, Scotland.
„	James Steven, Scotland.	„	Thomas M'Call Anderson, do.
„	John Coates, Ireland.	1859	Daniel Dougal, do.
1849	Robt. Brown M'Clelland, do.	1861	William Marshall, America.
„	Thomas Nicholson, Scotland.	„	John M. Murray, Scotland.
„	Robert Settle, England.	1862	James A. Allan, do.
„	Richard Thomas Tracy, Ireland.	1863	Robert M'K. Duncan, do.
„	Matthew John Rae, Scotland.	„	George M'Donald, do.
1850	John Ternan, Ireland.	„	Samuel J. Moore, Ireland.
„	John Henry Eddowes, England.	„	William Fraser, Nova Scotia.
„	James Brash, Scotland.	„	T. Algernon Chapman, Scotland.
1851	Alexander Marshall, do.	„	Algernon Wood Smith, do.
„	Andrew Spearing, Ireland.	„	John P. Atkinson, England.
„	James B. Montgomery, England.	1864	John Wyber, Scotland.
„	Robert Perry, Scotland.	„	John G. Wilson, M.A., do.
„	John Watson, B.A., do.	1865	Arthur A. Jamieson, England.
1853	John Ritchie Brown, do.	1867	Fred. H. Quaife, M.A., Sydney, N.S.W.
„	Charles D. Campbell, Ireland.		

DOCTORS OF MEDICINE (M.D.) (*N.R.*)

- 1876 <sup>1</sup> Gardner, William, M.B., England.
- 1877 <sup>1</sup> Turner, William Y., M.B., Scotland. Thesis, "The Ethnology of the Motu."
- 1879 <sup>1</sup> Fleming, William James, M.B., Scotland. Thesis, "The Dierotic Notch in Pulse Tracings."
- 1880 <sup>1</sup> Oliver, Thomas, M.B., Scotland. Thesis, "Heredity viewed in its relation to Responsibility."
- 1880 <sup>1</sup> Bryce, James, M.B., Scotland. Thesis, "That Mankind originated as a Common Family—most probably on a Continent in the Indian Ocean—certainly within the Tropics."
- 1881 <sup>1</sup> Adams, James Alexander, M.B., Scotland. Thesis, "Anatomical Relation between Abscess of Brain and Aural Disease."
- 1881 <sup>1</sup> Stewart, Alexander, M.B., Scotland. Thesis, "History of a Personal Attack of Typhoid Fever."
- 1881 <sup>1</sup> Drummond, James, M.B., Scotland. Thesis, "Sea Sickness: its Etiology, Symptoms, and Treatment."
- 1881 <sup>1</sup> Macphail, Donald, M.B., Scotland. Thesis, "Chemical Investigations on the Degenerative Changes in Diseased Bone."
- 1882 <sup>1</sup> Cairns, David, M.B. Thesis, "An Outbreak of Pyæmia."
- 1882 <sup>1</sup> Adam, Thomas Bate, M.B., Scotland. Thesis, "The Pathology and Etiology of Elephantoid Disease."
- 1882 <sup>1</sup> Rankin, Guthrie, M.B., Scotland. Thesis, "Puerperal Fever."
- 1883 <sup>1</sup> Inglis, David Wood, M.A., M.B., Scotland. Thesis, "On the Prevention of Lead Poisoning among Workers in White Lead Factories."
- 1883 <sup>1</sup> Newman, David, M.B., Scotland. Thesis, "Displacements of the Kidney."
- 1884 <sup>1</sup> Lawrie, J. Macpherson, M.B., Scotland. Thesis, "On some Symptoms of Locomotor Ataxy."
- 1884 <sup>1</sup> Allan, Robert, M.B., Scotland. Thesis, "Dermoid Cysts."
- 1884 <sup>2</sup> Middleton, George S., M.A., M.B., Scotland. Thesis, "On the Pathology of Pseudo-Hypertrophic Muscular Paralysis."
- 1884 <sup>2</sup> Steven, John Lindsay, M.B., Scotland. Thesis, "The Pathology of Suppurative Inflammations of the Kidneys."
- 1885 <sup>2</sup> Mackay, John Yule, M.B., Scotland. Thesis, "The Origin and Development of the Larger Arteries."
- 1885 <sup>1</sup> Macvic, William, M.B., Scotland. Thesis, "Atrophic Infantile Paralysis."
- 1885 <sup>1</sup> Dougal, James, M.B., Scotland. Thesis, "Puerperal Pyrexia."
- 1886 <sup>1</sup> Lawrie, William John, M.B., Scotland. Thesis, "Pathological Formations of the Skin."
- 1886 <sup>2</sup> Somerville, William Francis, M.A., B.Sc., M.B., Scotland. Thesis, "Urosemiotic: the Pathological Chemistry of the Urine, the complete Quantitative Analysis of the Urine; a valuable aid to Clinical Diagnosis."
- 1886 <sup>2</sup> Stewart, Robert Sloss, M.B., Scotland. Thesis, "Observations on the Spinal Cord in the Insane."
- 1886 <sup>1</sup> Rankin, Alexander, M.B., Scotland. Thesis, "Cerebral Cases, with remarks."
- 1886 <sup>1</sup> Auld, Alexander Gunn, M.B., Scotland. Thesis, "Studies in Materia Medica."
- 1887 <sup>1</sup> Chalmers, Archibald Kerr, M.B., Scotland. Thesis, "The Temperature Curve of Specific Fevers."
- 1887 <sup>1</sup> Neilson, Henry John, M.B., Scotland. Thesis, "On the observation of the pupil as a guide in the administration of Chloroform."
- 1887 <sup>1</sup> Brown, John, M.B., Scotland. Thesis, "Maternal Impressions."

<sup>1</sup> Commended for Thesis.<sup>2</sup> Highly Commended.



- 1887 <sup>1</sup> Love, John, M.B., Scotland. Thesis, "Three Cases of Cortical Epilepsy considered in relation to the localization of the discharging lesion."
- 1888 <sup>1</sup> Finlay, David, M.B., Scotland. Thesis, "Clinical Observations on Epileptic Insanity."
- 1888 <sup>1</sup> Love, James Kerr, M.B. Thesis, "The Limits of Hearing."
- 1888 <sup>1</sup> Macpherson, Charles, M.B., Scotland. Thesis, "Plural Pregnancies."
- 1888 <sup>1</sup> Wallace, William, M.B., Scotland. Thesis, "The Field of Vision: with special reference to its Anomalies in Diseases of the Nervous System."
- 1889 <sup>1</sup> Christie, William Walls, M.B., C.M., Scotland. Thesis, "The Outbreak of Febrile Disease in St. Mary's Roman Catholic Industrial Schools, Glasgow, March 1888: its Clinical Features and Nature."
- 1889 <sup>1</sup> Kelly, James Kellock, M.B., Scotland. Thesis, "Private Obstetric Practice: an analysis of 3000 consecutive cases."
- 1889 <sup>1</sup> Mackenzie, William James, M.B., India. Thesis, "The effects of the conditions of London Life on the Nervous System: with remarks on the treatment."
- 1889 <sup>1</sup> Hinshelwood, James, M.A., M.B., Scotland. Thesis, "A Clinical Study of Syphilitic Diseases of the Nervous System."
- 1890 <sup>1</sup> Anderson, John Alexander, M.B., Scotland. Thesis, "On Tetanus: with a record of six cases."
- 1890 <sup>1</sup> Bankier, Alexander Milne, M.B., England. Thesis, "Influenza."
- 1891 <sup>1</sup> Smith, John Macdowal, M.B., Scotland. Thesis, "The Disposal of Sewage and City Refuse."
- 1891 <sup>2</sup> Rhodes, Hugh, M.B., C.M., England. Thesis, "Koch's Treatment in Phthisis and Lupus."
- 1891 <sup>1</sup> Lannatyne, Gilbert Alexander, M.B., C.M., Scotland. Thesis, "The Treatment of Diphtheria by the Injection of the Erysipelas Albumose."
- 1891 <sup>1</sup> McGregor, Andrew Nicholson, M.B., C.M., Scotland. Thesis, "Some Notes on the Repair of Bone, with special reference to Transplantation and other Artificial Aids."
- 1891 <sup>1</sup> Ramsay, Andrew Maitland, M.B., C.M., Scotland. Thesis, "Exophthalmic Goitre."
- 1891 <sup>1</sup> Johnstone, John Carlyle, M.B., C.M., Scotland. Thesis, "Some Notes on the use of Sulphonal."
- 1892 <sup>1</sup> Highet, Hugh, M.B., C.M., Scotland. Thesis, "The Bronchipneumonia of Influenza, as it occurs in the Adult Subject."
- 1892 <sup>1</sup> Park, Alexander Glen, M.B., C.M., Scotland. Thesis, "Defects of Speech."
- 1893 <sup>1</sup> Lang, Hugh, M.B., C.M., Scotland. Thesis, "Empyema, with Notes on a Series of Cases."
- 1893 <sup>1</sup> Gillies, Hugh Cameron, M.B., C.M., Scotland. Thesis, "The Theory of Counter-irritation."
- 1893 <sup>2</sup> Carslaw, John Howie, M.A., M.B., C.M., Scotland. Thesis, "On the severer forms of Scarlet Fever, with special reference to Antipyretic Methods of Treatment."
- 1893 <sup>1</sup> Adam, Robert Hillhouse, M.A., M.B., C.M., Scotland. Thesis, "Observations on some Enteric Fever Epidemics."
- 1893 <sup>1</sup> Bryce, Alexander, M.B., C.M., Scotland. Thesis, "Sanitation in Dairy Farms in relation to diseases attributable to Cows' Milk."
- 1893 <sup>1</sup> Dunlop, Alexander Watson, M.A., M.B., C.M., Scotland. Thesis, "A recent Epidemic of Smallpox, with some remarks on Re-vaccination."
- 1893 <sup>1</sup> Gemmell, William, M.B., C.M., Scotland. Thesis, "On the Treatment of Phthisis by a long Sea Voyage in a sailing ship."
- 1893 <sup>1</sup> Watson, William, M.B., C.M., Scotland. Thesis, "The Prevention and Treatment of Diphtheria."

<sup>1</sup> Commended for Thesis.<sup>2</sup> With Honours.

1894. <sup>1</sup> Johnston, John M'Cubbin, M.A., M.B., C.M., Scotland. Thesis, "The Prognosis of Acute Lobar Pneumonia in the Pauper Class."
- 1894 <sup>2</sup> Jack, William Robert, B.Sc., M.B., C.M., Scotland. Thesis, "Observations on the Analysis of Voluntary Muscular Movements by certain new Instruments."
- 1895 <sup>1</sup> Abercrombie, Peter Henderson, M.B., C.M., Scotland. Thesis, "Turbinotomy in Nasal Stenosis: Analysis and Notes of 66 cases."
- 1895 <sup>2</sup> Monro, Thomas Kirkpatrick, M.A., M.B., C.M., Scotland. Thesis, "Essays in Neurology: Historical and Clinical."
- 1895 <sup>1</sup> Banks, Charles, M.B., C.M., Scotland. Thesis, "Observations on Epidemics of Cholera in India with a special reference to their immediate connection with pilgrimages."
- 1895 <sup>1</sup> Bell, Andrew Lees, M.B., C.M., Scotland. Thesis, "The Influence of a previous sire, and its relations to maternal impressions."
- 1895 <sup>1</sup> Campbell, Finkay Stewart, M.B., C.M., Scotland. Thesis, "Paroxysmal Haemoglobinuria: its treatment with special reference to the arrest of the Paroxysm by Quinine."
- 1895 <sup>1</sup> Charles, John, M.B., C.M., Scotland. Thesis, "A contribution to the Meteorology of Sporadic Pneumonia."
- 1895 <sup>1</sup> Macgregor, John, M.B., C.M., Scotland. Thesis, "On Paralysis following Diphtheria in Children."
- 1895 <sup>1</sup> Edington, George Henry, M.B., C.M., Scotland. Thesis, "Bile Salts (Glycocholate and Taurocholate Soda) in relation to excretion of Urea, etc."
- 1895 <sup>1</sup> Hughes, Arthur Davies, M.B., C.M., Wales. Thesis, "Anchylostomiasis."
- 1895 <sup>1</sup> Mann, Hamilton Clelland, M.B., C.M., Scotland. Thesis, "On Myxoedema and the Functions of the Thyroid Gland: with notes on the treatment of certain cases of Insanity by Thyroid preparations."
- 1896 <sup>1</sup> Marshall, Robert James, M.B., C.M., Scotland. Thesis, "The mild Malaria Fevers and their Microbe."
- 1896 <sup>1</sup> Dittmar, Frederick, M.A., M.B., C.M., Scotland. Thesis, "Scarlatinal Albuminuria."
- 1896 <sup>1</sup> Gray, Albert Alexander, M.B., C.M., Scotland. Thesis, "An Investigation into some of the Principles of Auscultation."
- 1896 <sup>1</sup> Nisbet, Adam Thomson, M.B., C.M., Scotland. Thesis, "Observations on some cases of Liver Access."
- 1896 <sup>1</sup> Todd, James, M.B., C.M., Scotland. Thesis, "Puerperal Scarlatina."
- 1896 <sup>2</sup> Kennedy, Robert, M.A., B.Sc., M.B., C.M., Scotland. Thesis, "Studies on the Regeneration of Nerves."
- 1896 <sup>1</sup> Kirkland, Thomas Speirs, M.B., C.M., Scotland. Thesis, "Quinine Anaurosis."
- 1897 <sup>1</sup> Don, William Walton, M.B., C.M., England. Thesis, "Thyroid Therapeutics."
- 1897 <sup>1</sup> Hunter, Walter King, B.Sc., M.B., C.M., Scotland. Thesis, "A contribution to the Etiology of Beri-Beri."
- 1897 <sup>1</sup> Thomson, James, M.B., C.M., Scotland. Thesis, "Exophthalmic Goitre, with special reference to its treatment by Thymus Gland."
- 1897 <sup>2,3</sup> Thomson, Robert Stevenson, B.Sc., M.B., C.M., Scotland. Thesis, "Pertussal Glucosuria, with observations on the reduction of Fehling's solution by the urine in childhood."
- 1898 <sup>1</sup> Brownlee, John, M.A., M.B., C.M., Scotland. Thesis, "The Diagnosis and Hospital Administration of Scarlatina."
- 1897 <sup>1</sup> Galloway, Andrew Fleming, M.B., C.M., Scotland. Thesis, "Moveable Kidney: its Aetiology and Symptoms."

<sup>1</sup> Commended for Thesis.<sup>2</sup> With Honours.<sup>3</sup> Gained a Bellahouston Gold Medal.

- 1897 <sup>1</sup> Harris, David Fraser, B.Sc., M.B., C.M., Scotland. Thesis, "A Research into the Spectroscopy of Blood-pigment, and its derivatives in health and disease."
- 1897 <sup>1</sup> Seright, William, M.B., C.M., Scotland. Thesis, "Neurasthenia (nervous exhaustion): a review of the origin and growth of the term, frequency of the disease, and of its chief forms and classifications, symptoms, diagnosis, prognosis, theories and treatment."
- 1897 <sup>1</sup> Temple, Lewis Dunbar, M.B., C.M., Scotland. Thesis, "Sporadic Cretinism and allied disorders."
- 1897 <sup>1</sup> Wylie, Richard John, M.B., C.M., Scotland. Thesis, "Pneumonia, with notes on twenty-nine cases."
- 1898 <sup>1</sup> M'Kenzie, Daniel, M.B., C.M., Scotland. Thesis, "Endemic Goitre, with particular reference to its occurrence in Lanarkshire, and to its Etiology."
- 1898 <sup>1</sup> Bell, Robert Gordon, M.B., C.M., Scotland. Thesis, "Enteric Studies, chiefly in Aberrant Types."
- 1898 <sup>2 3</sup> Findlay, John Wainmann, M.B., C.M., Scotland. Thesis, "The Choroid Plexuses of the Lateral Ventricles, their Anatomy, Functions, and Pathology (in relation specially to Insanity)."
- 1898 <sup>1</sup> Wilson, James Dunlop Octavus, M.B., C.M., Scotland. Thesis, "Adenoid Vegetations in the Nasopharynx: a Clinical and Pathological Study of 214 Cases."
- 1898 <sup>1</sup> Biernacki, John Thomson, M.B., C.M., India. Thesis, "Secondary Microbic Invasion occurring in the course of the Commoner Fevers."
- 1898 <sup>1</sup> Thomson, Henry Hyslop, M.B., C.M., Scotland. Thesis, "Epilepsy: a theory as to its probable cause, with some remarks regarding its relation to Insanity and Hysteria."
- 1898 <sup>1</sup> Webster, Alfred, M.B., C.M., England. Thesis, "Cardiac Inhibition in relation to Cerebral Anæmia and Epileptiform Crises."
- 1899 <sup>1</sup> Marshall, Campbell Samson, M.B., C.M., Scotland. Thesis, "Antistreptococcus Serum: its application in the treatment of Scarlatina Anginosa."
- 1899 <sup>1</sup> Primrose, Edward James, M.A., M.B., C.M., Scotland. Thesis, "Notes on the Method and on the Diagnostic Value of the Serum Reaction (Widal's Test) in Enteric Fever: with a record of 149 examinations of Serum made in 57 cases of Enteric Fever, and in 22 other cases."
- 1899 <sup>2 3</sup> Hawthorne, Charles Oliver, M.B., C.M., England. Thesis, "Studies in Clinical Medicine."
- 1899 <sup>1</sup> Blair, David, M.A., M.B., C.M., Scotland. Thesis, "Acromegaly with Insanity."
- 1899 <sup>1</sup> Gordon, John, M.B., C.M., Scotland. Thesis, "Tuberculin: as a remedy for Lupus, and its position as a Therapeutic Agent in the treatment of Phthisis Pulmonalis."
- 1899 <sup>1</sup> Kerr, Hugh, M.A., M.B., C.M., Scotland. Thesis, "Recurrent Insanity."
- 1899 <sup>1</sup> Scott, Robert, M.B., C.M., Australia. Thesis, "A review of Hydatid Disease in Australasia during the decennial period 1888-97."
- 1899 <sup>2 3</sup> M'Kendrick, John Souttar, M.B., C.M., Scotland. Thesis, "Zymolysis of Tissue, Physiological and Pathological, with a historical *résumé* of the nature and action of Enzymes."
- 1899 <sup>2 3</sup> Scobie, William, M.A., B.D., M.B., C.M., Scotland. Thesis, "The agglutinating reaction in Enteric Fever, with special reference to Prognosis."
- 1899 <sup>1</sup> Gray, John Gilchrist, M.B., C.M., Scotland. Thesis, "Albuminuria and Nephritis occurring in connection with Scarlet Fever in combination with Varicella, the Varicella occurring during the acute stage or during the period of convalescence."

<sup>1</sup> Commended for Thesis.<sup>2</sup> With Honours.<sup>3</sup> Gained a Bellahouston Gold Medal.

- 1899 <sup>1</sup> Macharg, William Edgar, M.B., C.M., Scotland. Thesis, "An analytical account of fifty-seven cases of Puerperal Infection."
- 1899 <sup>1</sup> Ormond, James Service, M.B., Ch.B., Australia. Thesis, "Some results of treatment as illustrated by the Sphygmograph."
- 1900 <sup>23</sup> James Fairlie Gemmill, M.A., M.B., C.M., Scotland. Thesis, "A Teratological Study."
- 1900 <sup>1</sup> James Adam, M.A., M.B., C.M., Scotland. Thesis, "Remarks on the nature and treatment of Asthma."
- 1900 <sup>1</sup> William Carrick Allan, M.B., C.M., Scotland. Thesis, "Extra-Uterine Pregnancy."
- 1900 <sup>1</sup> John Laird Yuill, M.B., C.M., Scotland. Thesis, "On the Mental Deterioration in Epilepsy and Hemiplegia."
- 1900 <sup>1</sup> Leslie Buchanan, M.B., C.M., Ireland. Thesis, "Cyclitis: a Study of the inflammatory exudates into the vitreous body in cases of Cyclitis."
- 1900 <sup>1</sup> Malcolm Alexander McIntyre Sinclair, M.B., C.M., England. Thesis, "A Study in Aphasia, with special reference to some of its transitory manifestations."
- 1900 <sup>1</sup> Annie Louise McIlroy, M.B., Ch.B., Ireland. Thesis, "Tubal Gestation: its pathology and diagnosis, as illustrated by the record of twenty-two cases."
- 1901 <sup>1</sup> Alfred George Newell, M.B., C.M., India. Thesis, "Insanitary Areas and Houses in Bombay and their relation to Plague, with schemes for improvement of Areas."
- 1901 <sup>23</sup> David Louis Cairns, M.B., Ch.B., Scotland. Thesis, "Researches on the agglutinating and prophylactic properties of Blood Serum in cases of Plague, with observations on the haematology and bacteriology of the disease."
- 1901 <sup>1</sup> John Aitken, M.B., Ch.B., Scotland. Thesis, "Blood Counts in the New Born."
- 1901 <sup>1</sup> Arthur James Ballantyne, M.B., Ch.B., Scotland. Thesis, "Affections of the Eye due to injury by blunt objects."
- 1901 <sup>1</sup> George Coats, M.B., Ch.B., Scotland. Thesis, "Unilateral Haemorrhagic Retinitis and Haemorrhagic Glaucoma."
- 1901 <sup>1</sup> John Henderson, M.B., Ch.B., Scotland. Thesis, "Observations on the Maternal Blood at term and during the puerperium."
- 1901 <sup>1</sup> James Donald Rae Monro, M.A., M.B., C.M., Scotland. Thesis, "A study of Appendicitis in general practice, with an analysis of thirty-six cases."
- 1902 <sup>23</sup> Alexander Robert Ferguson, M.B., C.M., England. Thesis, "The Leucocytosis of Variola, with a study of the haematopietic organs in the disease, and also of the lesions of the skin."
- 1902 <sup>1</sup> Andrew Wilson, M.B., C.M., Scotland. Thesis, "A clinical study of the relation of Syphilis to Diseases of the Eye."
- 1902 <sup>1</sup> Andrew Colville Wilson, B.Sc., M.B., C.M., Scotland. Thesis, "The Medullated Fibres of the Cerebral Cortex."
- 1903 <sup>23</sup> George Lamb, M.B., C.M., Scotland. Thesis, "On the action of the venoms of the Cobra (*Naja Tripudiana*) and of the Daboia (*Daboia Russellii*) on the red blood corpuscles and on the blood plasma."
- 1903 <sup>23</sup> William Glen Liston, M.B., Ch.B., India. Thesis, "Aetiology of Malaria."
- 1903 <sup>1</sup> Charles Campbell Cuthbert, M.A., M.B., Ch.B., Scotland. Thesis, "A clinical study of Renal cases."
- 1903 <sup>1</sup> James McHaffie, M.B., Ch.B., Scotland. Thesis, "On the complications occurring in 600 consecutive cases of Scarlatina."

<sup>1</sup> Commended for Thesis.<sup>2</sup> With Honours.<sup>3</sup> Gained a Bellahouston Gold Medal.

- 1903 <sup>1</sup> Jean Effie Prowse, M.B., Ch.B., England. Thesis, "The relation of Vesicular Mole to Chorion Carcinoma."
- 1903 <sup>23</sup> John Hammond Teacher, M.A., M.B., C.M., Scotland. Thesis, "On Chorion-epithelioma and the occurrence of Chorioneplitheliomatous and Hydatidiform Mole-like structures in Teratomata: a Pathological and Clinical study."
- 1903 <sup>1</sup> George Morris Crawford, M.B., Ch.B., Scotland. Thesis, "Nitrogen Excretion in Diphtheria."
- 1903 <sup>1</sup> Reginald Nairn Dunlop, M.B., Ch.B., Scotland. Thesis, "An Analysis of fifty cases of Eclampsia."
- 1903 <sup>1</sup> Arthur Robin, M.B., Ch.B., Scotland. Thesis, "A contribution to the Haematology of Puerperal Fever, with some observations on the influence of the intravenous injection of Antistreptococcic Serum."
- 1903 <sup>1</sup> Donald Sage Sutherland, M.B., Ch.B., Scotland. Thesis, "An investigation into the specific Etiology of Scarlet Fever."
- 1903 <sup>1</sup> Malcolm Watson, M.B., C.M., Scotland. Thesis, "The effect of Drainage and other Measures on the Malaria of Klang, Federated Malay States."
- 1904 <sup>1</sup> Adam Brown Kelly, M.B., C.M., D.Sc., Scotland. Thesis, "Contributions to the Pathology and Diagnosis of certain Affections of the Antrum of Highmore."
- 1904 <sup>1</sup> Daniel Macpherson Taylor, M.A., M.B., C.M., Scotland. Thesis, "Sympathetic Ophthalmitis after Preventive Enucleation."
- 1904 <sup>1</sup> Ernest Alexander Walker, M.A., M.B., C.M., Scotland. Thesis, "Ten Successive Laparotomies: their History, Clinical Aspects, and Technique."
- 1904 <sup>23</sup> Harry Egerton Brown, M.B., Ch.B., Scotland. Thesis, "The Brain in Idiocy."
- 1904 <sup>23</sup> Edward Provan Cathcart, M.B., Ch.B., Scotland. Thesis, "On the occurrence of Antibodies to Ferments in the Normal Blood Serum, with special reference to Antitrypsin."
- 1904 <sup>1</sup> Leonard Findlay, M.B., Ch.B., Scotland. Thesis, "Clinical and Pathological Study of a case of General Tuberculosis, complicated by the presence of Ganglionic Neurogliomata in the Brain, and a Peculiar Vacuolar Degeneration of the Myocardium."
- 1904 <sup>1</sup> James Dunlop Lickley, M.B., Ch.B., England. Thesis, "The Human Sternum."
- 1904 <sup>1</sup> Andrew Love, M.B., Ch.B., Scotland. Thesis, "An Investigation into the Leucocytosis of Typhus Fever, with observations on the changes present in the bone marrow, spleen and lymphoid tissues."
- 1904 <sup>1</sup> Murdoch Macdonald, M.B., Ch.B., Scotland. Thesis, "A Report on the Clinical and Bacteriological Features of Vincent's Angina, with Notes of Cases."
- 1904 <sup>1</sup> Walter Lewis Thomson, M.B., Ch.B., Scotland. Thesis, "Bacteriological Investigation of a School Outbreak of Diphtheria, with special reference to the Hoffmann Bacillus."
- 1905 <sup>2</sup> William Herbert Brown, M.B., Ch.B., Scotland. Thesis, "A Clinical Study of the Glycogenic Reaction in Blood."
- 1905 <sup>2</sup> John James Buchan, M.B., Ch.B., Scotland. Thesis, "Bacteriuria in Enteric Fever."
- 1905 <sup>23</sup> Edward Seymour Chapman, M.B., Ch.B., England. Thesis, "A Histological Study of the Kidney in Scarlatina."
- 1905 <sup>23</sup> Thomas Divine, M.B., C.M., Scotland. Thesis, "An Inquiry into Infantile Mortality, with special reference to its Causation and Prevention."

<sup>1</sup> Commended for Thesis.<sup>2</sup> With Honours.<sup>3</sup> Gained a Bellahouston Gold Medal.

- 1905 <sup>2 3</sup> William Barr Inglis Pollock, M.B., Ch.B., Scotland. Thesis, "A Bacteriological and Clinical Study of Conjunctivitis."
- 1905 <sup>1</sup> George Balfour Eadie, M.B., Ch.B., Scotland. Thesis, "Tuberculosis of the Myocardium."
- 1905 <sup>1</sup> Donald McFarlane Livingstone, M.B., Ch.B., Scotland. Thesis, "Traumatic Ulcer of the Cornea."
- 1905 <sup>1</sup> Robert Macnab Marshall, M.B., Ch.B., Scotland. Thesis, "A Clinical and Pathological Study of an unusual case of Progressive Muscular Dystrophy—type facio-scapulo-humeral—with special reference to its Nosology and Pathogeny."
- 1905 <sup>1</sup> Allan Martin, M.A., B.Sc., M.B., Ch.B., Scotland. Thesis, "The Field of Vision, with special reference to Bjerrum's Screen, with accompanying Charts."
- 1905 <sup>1</sup> James Blakely Miller, M.B., Ch.B., Scotland. Thesis, "Observations on the Blood in Acute Lobar Pneumonia."
- 1905 <sup>1</sup> Robert Niven, M.B., Ch.B., Scotland. Thesis, "Smallpox: a Clinical Study of about 2000 cases of the disease."
- 1905 <sup>1</sup> David Russell, M.B., Ch.B., Scotland. Thesis, "A Study of the Blood in Postmalarial Anæmia as observed in the South of Spain."
- 1905 <sup>1</sup> John Strathearn, M.B., Ch.B., Scotland. Thesis, "On Obstruction of the Central Artery of the Retina."
- 1905 <sup>1</sup> Thomas Bird Tierney, M.B., Ch.B., Scotland. Thesis, "The Leucocytosis of Pertussis."
- 1905 <sup>1</sup> John Wotherspoon, M.B., Ch.B., Scotland. Thesis, "A Contribution to the Study of the Formation and Properties of Nephrotoxins."
- 1906 <sup>1</sup> Madge Speirs Maclean, M.B., C.M., Scotland. Thesis, "A Clinical Study of an Outbreak of Diphtheria occurring in an Orphanage."
- 1906 <sup>2 3</sup> David Maclure Cowan, M.B., Ch.B., Scotland. Thesis, "The Diagnosis of Typhoid Fever by Clinical, Haematological, and Bacteriological Methods."
- 1906 <sup>2 3</sup> Lizzie Thomson Fraser, M.B., Ch.B., Scotland. Thesis, "On the Value of the Tuberculo-opsonic Index in Diagnosis."
- 1906 <sup>1</sup> Alexander Gray Banks, M.B., Ch.B., Scotland. Thesis, "The Variations in Scarlet Fever of the Opsonic Power for Streptococci."
- 1906 <sup>1</sup> Robert Stobo, M.B., C.M., Scotland. Thesis, "The Contributory Causes of Pulmonary Tuberculosis."

<sup>1</sup> Commended for Thesis.<sup>2</sup> With Honours.<sup>3</sup> Gained a Bellahouston Gold Medal.

## BACHELORS OF MEDICINE (M.B.). HONOURS.

1866	Robert W. Forrest,	Scotland.	1894	Alexander MacLennan,	Scotland
"	Henry T. Pringle,	"	"	Wm. Stewart Cook, B.Sc.,	"
1867	Ebenezer Duncan,	"	"	Jas. C. Robertson, M.A., B.Sc.,	"
"	Joseph Coats,	"	"	Jas. Murray Young,	"
"	James Finlayson,	"	"	John Francis Robt. Gairdner,	"
1868	Thomas Barr,	"	"	John Wainman Findlay,	"
"	William MacLachlan,	"	1895	Joshua Ferguson, M.A.,	"
"	Angus Macmillan,	"	"	Henry Alex. Pattullo,	"
1869	James Coats,	"	"	Ernest A. Walker, M.A.,	"
1871	David Wilkie,	"	1896	John Knight,	"
"	John Aikman,	"	"	Madge Speirs Maclean,	"
1872	John D. Macdonald,	"	1897	John A. C. Macewen, B.Sc.,	"
"	Samson Gemmell,	"	"	Thomas Hunter, M.A., B.Sc.,	"
1876	Geo. S. Middleton, M.A.,	"	1898	Wm. Kilpatrick Hutton, M.A.,	"
"	Richard B. Macpherson,	"	"	Robert Fullarton, M.A.,	"
1877	Johan B. Knobel,	Africa.	"	William Webster,	"
"	Donald Macphail,	Scotland.	1899	Alex. Laurie Watson, M.A.,	"
"	John Carlyle Johnstone,	"	1900	Charles Campbell Cuthbert, M.A.,	"
"	Edward D. M. Mackellar,	"	"	James Dunlop Lickley,	England.
1878	Alexander Fraser,	"	1901	Alex. Dey Thompson,	Scotland.
"	James Morton,	"	"	William Macalister Brown,	"
"	William Partington,	"	1902	Andrew Miller Kerr,	"
"	Lawrence A. Waddell,	"	"	Joseph White, M.A., B.Sc.,	"
1879	William K. Peden,	"	"	John Morison,	India.
"	Ralph D. Stevenson,	Australia.	1903	Spencer Mort,	Scotland.
1880	Andw. A. Hogarth, M.A.,	Scotland.	"	Alex. Matheson, M.A., B.Sc.,	"
"	J. M'Gregor-Robertson, M.A.,	"	"	Wm. D. H. Stevenson, M.A.,	India.
"	John Lindsay Steven,	"	"	Carl H. Browning,	Scotland.
1881	John More Young, M.A.,	"	"	Peter L. Sutherland,	"
1882	Robert Beith,	"	1904	Robt. Buchanan Carslaw, M.A.,	"
1883	John Innes Dunlop,	"	"	George Munn Gray,	"
1884	Charles O. Hawthorne,	England.	1905	George A. Allan,	"
1886	Alexander Bryce,	Scotland.	"	William B. M. Martin,	Ireland.
"	Wm. Snodgrass, M.A.,	U.S.A.	"	James H. Baird, B.A.,	New Zealand.
"	John H. Carslaw, M.A.,	Scotland.	"	John S. Dunn, M.A.,	Scotland.
1887	William MacLennan,	"	"	William Rolland,	"
1891	Hugh Galt,	"	1906	Robert Stewart M'Kim, M.A.,	"
"	Robert Currie Robertson, M.A.,	"	"	Peter Mitchell, M.A.,	"
1892	John Norton,	Scotland.	"	John Stevenson,	"
"	James Carslaw, M.A.,	"			

## BRUNTON MEMORIAL PRIZE OF £10,

*Awarded to the most distinguished Graduate in Medicine of the year.*

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|--|---|
| 1880. John Lindsay Steven, M.B., C.M.        | 1896. John Knight, M.B., C.M.                       |
| 1881. John More Young, M.A., M.B., C.M.      | 1897. John Allan Craigie Macewen, B.Sc., M.B., C.M. |
| 1882. Robert Beith, M.B., C.M.               | „ Thomas Hunter, M.A., B.Sc., M.B., Ch.B. } Equal.  |
| 1883. John Innes Dunlop, M.B., C.M.          | 1898. William Kilpatrick Hutton, M.A., M.B., C.M.   |
| 1884. Charles Oliver Hawthorne, M.B., C.M.   | 1899. Alex. Laurie Watson, M.A., M.B., Ch.B.        |
| 1885. Andrew Wilson, M.B., C.M.              | 1900. Charles C. Cuthbert, M.A., M.B., Ch.B.        |
| 1886. Alexander Bryce, M.B., C.M.            | 1901. Alex. Dey Thompson, M.B., Ch.B.               |
| 1887. William MacLennan, M.B., C.M.          | 1902. Andrew Miller Kerr, M.B., Ch.B.               |
| 1888. Landel Rose Oswald, M.B., C.M.         | 1903. Spencer Mort, M.B., Ch.B.                     |
| 1889. William Robert Jack, B.Sc., M.B., C.M. | 1904. Robert B. Carslaw, M.A., M.B., Ch.B.          |
| 1890. George Lamb, M.B., C.M.                | 1905. George Allison Allan, M.B., Ch.B.             |
| 1891. Hugh Galt, M.B., C.M.                  | 1906. Peter Mitchell, M.A., M.B., Ch.B.             |
| 1892. John Morton, M.B., C.M.                |   |
| 1893. John Johnson Urwin, M.B., C.M.         |   |
| 1894. Alexander MacLennan, M.B., C.M.        |   |
| 1895. Joshua Ferguson, M.A., M.B., C.M.      |   |

## THOMAS LOGAN MEDAL AND PRIZE,

*Awarded to the most distinguished Graduate in Arts of the year.*

- |                                      |  |
|--------------------------------------|--|
| 1888. Ernest Findlay Scott, M.A.     | 1900. Mabel Atkinson, M.A.                       |
| 1889. Alfred Ernest Garvie, M.A.     | 1901. Dougald Black M'Quistan, M.A.              |
| 1890. John Edgar M'Fadyen, M.A.      | 1902. William Lindsay Thompson, M.A.             |
| 1891. James Holm, M.A.               | 1903. William Sutherland, M.A.                   |
| 1892. Daniel Lamont, M.A.            | 1904. { Robert Nicol Cross, M.A.                 |
| 1893. Gilchrist Gibb Alexander, M.A. | 1904. { William Manson, M.A.                     |
| 1894. Henry Noel Brailsford, M.A.    | 1904. { John Miller, M.A. (Beith).               |
| 1895. William King Gillies, M.A.     | 1905. { James Carrick Miller Fairlie, M.A.       |
| 1896. George Donald Valentine, M.A.  | 1905. { Constance Helen Margaret Archibald, M.A. |
| 1897. Gavin Scott, M.A.              | 1906. Thomas Beaumont, M.A.                      |
| 1898. John Lyle Morison, M.A.        |  |
| 1899. John Lochhead, M.A.            |  |



## XII.—DEGREE AND PRIZE LIST.

### LIST OF DEGREES

CONFERRED IN THE VARIOUS FACULTIES AND OF PRIZES AND CERTIFICATES OF HONOUR AWARDED IN THE SEVERAL CLASSES OF THE UNIVERSITY DURING THE YEAR ENDING 1ST MAY, 1907.

#### DOCTORS OF DIVINITY (D.D.).

*April, 1907.*

- Rev. Dugald Butler, M.A., Minister of Tron Parish, Edinburgh.  
 Rev. John Smyth Carroll, M.A., Minister of St. John's U.F. Church, Glasgow.  
 Rt. Rev. Cosmo Gordon Lang, M.A., Bishop Suffragan of Stepney.  
 Rev. Alexander McLaren, B.A., Litt.D., Minister of Union Chapel, Manchester (*in absentia*).  
 Rev. William Page-Roberts, M.A., Canon of Canterbury.

#### DOCTORS OF LAWS (LL.D.).

*April, 1907.*

- His Royal Highness the Prince of Wales.  
 Her Royal Highness the Princess of Wales.  
 The Hon. the Lord Provost of Glasgow, William Bilsland.  
 The Right Hon. Herbert Henry Asquith, K.C., M.P., P.C., Rector of Glasgow University.  
 Her Grace the Duchess of Montrose.  
 The Right Hon. George Wyndham, M.P., P.C., formerly Rector of Glasgow University.  
 Alexander Ure, LL.B., K.C., M.P., Solicitor-General for Scotland.  
 Baron Dairoku Kikuchi, M.A., formerly Minister of Education, and President of the Imperial University, Tokyo, Japan.  
 Sir George Watt, M.B., C.M., C.I.E.  
 Sir William Robertson Copland, President of the Glasgow and West of Scotland Technical College.  
 Miss Janet Ann Galloway, Secretary at Queen Margaret College, Glasgow.  
 Emile Boutroux, Professor of Philosophy and Director of the Fondation Thiers, Paris, formerly Gifford Lecturer in Glasgow University.  
 John Macmillan Brown, M.A., formerly Professor of English in Canterbury College, Christchurch, New Zealand (*in absentia*).  
 John Norman Collie, Ph.D., F.R.S., Professor of Organic Chemistry, University College, London.  
 Ulisse Dini, Professor of Mathematics in the University of Pisa (*in absentia*).  
 Professor Adolf Harnack, D.D., Ph.D., Director of the Royal Library, Berlin (*in absentia*).

- Jules Henri Poincaré, Professor of Mathematics and Astronomy, Sorbonne, Paris.  
 Sidney Lee, B.A., D.Litt., Editor of the *Dictionary of National Biography*.  
 Dugald Sutherland MacColl, M.A., Keeper of the National Gallery of British Art (Tate Gallery), London.  
 James Alexander Reid, Dean of the Faculty of Procurators, Glasgow.  
 Nathaniel Dunlop, Chairman of the Clyde Navigation Trust.  
 George Gilbert Ramsay, Litt.D., Professor of Humanity in Glasgow University, 1863 to 1906.  
 John Gray M'Kendrick, M.D., F.R.S., Professor of Physiology in Glasgow University, 1876 to 1906.  
 Alexander Moody Stuart, Advocate, Professor of Law in Glasgow University, 1887 to 1905.  
 Donald MacAlister, M.A., M.D., D.C.L., Principal and Vice-Chancellor of Glasgow University.

## BACHELORS OF DIVINITY (B.D.).

*November, 1906.*

William Weir Clark, M.A.

*April, 1907.*

- |                                    |                             |
|------------------------------------|-----------------------------|
| Matthew Biggar, M.A.               | Alexander Moffatt, M.A.     |
| James Hutchison Cockburn, M.A.     | Thomas Neilson, M.A.        |
| Alexander Slater Dunlop, M.A.      | George Douglas Reith, M.A.  |
| Herbert Dunn, M.A.                 | Erie James Roberts, M.A.    |
| James Carrick Miller Fairlie, M.A. | John Arbuckle Swan, M.A.    |
| George Johnstone Jeffrey, M.A.     | George Douglas Turner, M.A. |
| John Macfarlane, M.A.              | George William Walker, M.A. |
| Alexander Ramsay Mackenzie, M.A.   | John Murray Woodburn, M.A.  |
| Ebenezer Macmillan, M.A.           |                             |

## BACHELORS OF LAWS (LL.B.).

*November, 1906.*

- |                           |                                      |
|---------------------------|--------------------------------------|
| Thomas Park Riddell, M.A. | Robert Walter Rogerson Shearer, M.A. |
|---------------------------|--------------------------------------|

*April, 1907.*

- |                                  |                              |
|----------------------------------|------------------------------|
| John Douglas Boswell, B.A., B.L. | George Norman Morrison, B.A. |
| Walter Hubbard, M.A.             | John Neil Orr, M.A.          |
| James M'Intosh, M.A.             |                              |

## BACHELORS OF LAW (B.L.).

*November, 1906.*

- |                         |                             |
|-------------------------|-----------------------------|
| Alexander Bisland Boyd. | James Alfred Mitchell, M.A. |
| John Brown.             | Robert Peden Smith, M.A.    |
| James Hamilton.         |                             |

*April, 1907.*

James Stevenson.

## DOCTORS OF MEDICINE (M.D.).

*July, 1906.*

## I. COMMENDATION.

- Madge Speirs Maclean, M.B., C.M., Scotland. Thesis, "A Clinical Study of an Outbreak of Diptheria occurring in an Orphanage."

## II. ORDINARY DEGREE.

- John Allan, M.B., C.M., Scotland. Thesis, "Infantile Mortality."  
 John Andrew Cook, M.B., C.M., Scotland. Thesis, "Acute Rheumatism and its Complications."  
 Daniel Ferguson, M.B., C.M., Scotland. Thesis, "Tabetic Optic Atrophy."  
 John Selkirk, M.A., M.B., C.M., Scotland. Thesis, "Gout."

*November, 1906.*

## I. WITH HONOURS.

- David Maclure Cowan, M.B., Ch.B., Scotland. Thesis, "The Diagnosis of Typhoid Fever by Clinical, Haematological, and Bacteriological Methods."  
 Lizzie Thomson Fraser, M.B., Ch.B., Scotland. Thesis, "On the Value of the Tuberculo-opsonic Index in Diagnosis."

## II. WITH COMMENDATION.

- Alexander Gray Banks, M.B., Ch.B., Scotland. Thesis, "The Variations in Scarlet Fever of the Opsonic Power for Streptococci."  
 Robert Stobo, M.B., C.M., Scotland. Thesis, "The Contributory Causes of Pulmonary Tuberculosis."

## III. ORDINARY DEGREE.

- William Archibald, M.B., Ch.B., Scotland. Thesis, "Scarlet Fever: a *résumé* of the behaviour of the disease in Glasgow during the twelve years 1893-1904, with special reference to Climatic Conditions."  
 John William Arthur, M.B., Ch.B., Scotland. Thesis, "Observations on the treatment of seventeen cases of Rheumatism and allied affections by Superheated Dry Air."  
 John Donald, M.B., C.M., Scotland. Thesis, "The Prophylaxis of Rabies."  
 John Gardner, M.B., Ch.B., Scotland. Thesis, "Pyelonephritis in the later months of Pregnancy."  
 Helen Mary Gordon, M.B., Ch.B., England. Thesis, "'Borderland Cases': their responsibilities and treatment in relation to general practice."  
 George Pillans Harlan, M.B., Ch.B., Scotland. Thesis, "Serum Therapy, with special reference to Tuberculosis."  
 Alexander Dingwall Kennedy, M.B., Ch.B., Scotland. Thesis, "Some observations on Age in relation to Disease."  
 David Dale Logan, M.B., Ch.B., Scotland. Thesis, "A Study of Puerperal Eclampsia: its most recent etiology and treatment."  
 Anna Pollock Martin, M.B., Ch.B., India. Thesis, "Observations on the effect of Insanity upon the Circulation of Tissue-lymph, with special reference to the condition of Stupor."  
 Mary Janet Pirret, M.B., Ch.B., Scotland. Thesis, "A Clinical Study on the relation of Cardiac to Mental Disease in Women."  
 Albert Samuel Worton, M.B., C.M., Scotland. Thesis, "Chronic Suppurative Disease of the Nasal Air Sinuses, and its Treatment."

*April, 1907.*

- Malcolm Campbell, M.B., C.M., Scotland. Thesis, "Some Observations on Infant Feeding, with Results of Clinical Examination of Human Milk in twenty cases."  
 William Jones Mackinnon, M.B., C.M., Scotland. Thesis, "Typhoid Fever."  
 Hugh Robertson, M.B., C.M., Scotland. Thesis, "Spontaneous Gangrene in Hysteria."

# BACHELOR OF MEDICINE AND MASTER IN SURGERY (M.B., C.M.).

July, 1906.

## HONOURS.

Robert Stewart M'Kim, M.A., Scotland.

# BACHELORS OF MEDICINE AND BACHELORS OF SURGERY (M.B., Ch.B.).

July, 1906.

## I. HONOURS.

<sup>1</sup> Peter Mitchell, M.A., Scotland. John Stevenson, Scotland.

## II. COMMENDATION.

William Rome Cammock, Scotland.	Jas. Richan Drever, M.A., Scotland.
George Haswell Wilson, England.	Elizabeth Maud M'Vail, Scotland.
James M'Farlane, Scotland.	William James Rutherford, Scotland.
Thomas Baillie Smith, Scotland.	William Gilfillan, Scotland.

## III. ORDINARY DEGREES.

John Anderson, M.A.,	f	Scotland.	David MacDonald,	Scotland.
B.Sc.,	f		John Robert M'Gilvray,	"
Thomas Barbour, M.A.,	f		William Anderson M'Kellar,	"
B.Sc.,	f	"	William Ferguson Mackenzie,	"
George Duncan Morrison	f	"	Norman Smith MacNaughtan,	"
Beaton,	f	"	Alister Argyle Campbell	f
Charles Burns,		"	M'Neill,	f
John Miller Hopkins	f	"	Andrew Alexander M'Whan,	"
Caldwell,	f	"	Florence Mann,	"
George Campbell,		"	Wm. Hislop Manson, M.A.,	"
Wm. Archibald Campbell,		"	Robert Marshall,	"
Henry Howard Christie, New Zealand.			John Miller,	"
John Sawers Clark, M.A., Scotland.			William Miller,	"
James Coutts,		"	Edith Oversby,	England.
Thomas Lawson Craig,		"	James Hogg Paul,	Scotland.
Arthur Muir Crawford,		"	Agnes Picken, M.A.,	"
Ernest Milne Eaton,		"	Alexander MacMillan Pollock,	"
William Gilbert,		"	Thomas Hood Rankin,	"
Arnold Harris Gray,		"	Vera Dagmar Reis,	Ireland.
Robert Neil Guthrie, New Zealand.			Frederick Gordon	f
Charles Francis Dyer	f	England.	Robertson,	f
Hammond,	f		William Hermann Sieger,	"
William Towers Hardie,		Scotland.	William Smellie,	"
Robert M'Cowan Hill,		"	James Stevenson,	"
Alexander Hunter,		"	Thomas Strain,	"
Archibald Yuill Hutchison,		"	David Laurence Tate,	Jamaica.
John Keys,		"	Charles Samson Thomson,	Scotland.
James Dunlop Kidd,		"	James Wyper,	"
William Hendrie Kirk,		"	John Young (Mount Vernon),	"
Alexander M'Call,		"	Morris Youdelevitz Young,	Syria.
Thomas M'Cririck, M.A.,	f			
B.Sc.,	f	"		

<sup>1</sup> Mr. Mitchell gains the Brunton Memorial Prize of Ten Pounds, awarded to the most distinguished Graduate in Medicine of the year.

*November, 1906.*

## I. COMMENDATION.

James Kennedy Welsh, Scotland.

## II. ORDINARY DEGREES.

James Montgomery }	Scotland.	Rose Isobel Hudson.	England.
Anderson, }		Percy James Kelly.	"
Donald Livingstone }	"	Hugh Walker Moir,	Scotland.
Carmichael, }	"	Patrick Joseph O'Hare,	"
Charles Game Angus }	"	James Chas. Donald- }	New Zealand.
Chislett, }	"	son Simpson,	
Robert Donald,	"	Robert Wilfrid Simpson.	Scotland.
Annie Rennie Hird,	"	Christina Gibson Thomlinson.	"

## DOCTORS OF SCIENCE (D.Sc.).

*April, 1907.*

John Brownlee, M.A., M.D., C.M. Thesis, "Statistical Studies in Immunity—(1) Smallpox and Vaccination, (2) Natural Immunity and the Capacity for Acquiring Immunity in the Acute Infectious Diseases, (3) the Theory of an Epidemic, (4) the Incubation Period and the Crisis "

Alfred Walter Stewart, B.Sc. Thesis, "Three Stereochemical Problems."

## BACHELORS OF SCIENCE (B.Sc.).

*November, 1906.**In Pure Science.*

Helen Maxwell Armour, M.A.	John Frew, M.A. <sup>1</sup>
John Henry Brightman.	Andrew Henderson, M.A.
Alfred Davidson. <sup>1</sup>	John Miller (Beith), M.A. <sup>2</sup>
Andrew Donald, M.A.	

*In Engineering.*

Alexander George Gardner Guthrie. Francis William Scougal.  
George Pate.<sup>3</sup>

*In Agriculture.*

William Stevenson.

*In Public Health.*

Thomas Orr, M.B., Ch.B.

*April, 1907.**In Geological Science (Old Regulations).*

Thomas Hill Wilson, M.A.

*In Pure Science.*

James Robert Brown.	John Kaye.
George Green, M.A. <sup>4</sup>	Andrew M'Millan, M.A.
Andrew Hutchison, M.A.	Arthur Turnbull, M.A.

<sup>1</sup> With Special Distinction in Chemistry.<sup>2</sup> With Special Distinction in (a) Mathematics, (b) Natural Philosophy, (c) Astronomy.<sup>3</sup> With Special Distinction in Electrical Engineering I.<sup>4</sup> With Special Distinction in (a) Mathematics, (b) Natural Philosophy.

*In Engineering.*

Robert Allan. <sup>1</sup>	Thomas Baird Maxwell. <sup>9</sup>
James Barr. <sup>2</sup>	George Millar.
Robert Boyle. <sup>3</sup>	James Mirrey.
James Westhall Brown. <sup>4</sup>	Andrew Irving Nicholson.
Henry Richmond Climie. <sup>5</sup>	William Selkirk Owen.
Frank Stewart Easton. <sup>6</sup>	Alexander Sutherland Ritchie. <sup>1</sup>
Alexander Gordon. <sup>7</sup>	Carl William Liepke-Roed.
George Rochfort Grange.	Charles Allison Taylor. <sup>10</sup>
Hugh Jack. <sup>2</sup>	William Thomson. <sup>11</sup>
Alexander Macdonald. <sup>8</sup>	Sebastian Greg Monteith Ure. <sup>12</sup>
Charles Calder Mackintosh.	Andrew Moray Wallace.
Alexander MacLaren. <sup>6</sup>	Robert Wallace.
Alexander Stephen MacLellan.	Harold Dakin Wheeler.
John Malcolm.	Arthur Hamilton Wilson.

*In Agriculture.*

John Brown.	John Hunter Smith.
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*In Public Health.*

George Arbuckle Brown, M.B., C.M.	John Muir, B.Sc. (Pure), M.B., Ch.B.
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## CERTIFICATES OF PROFICIENCY IN ENGINEERING SCIENCE.

*November, 1906.*

Alexander George Gardner Guthrie.	George Pate.
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## DOCTOR OF LETTERS (D.Litt.).

*April, 1907.*

Patrick Henderson Aitken, M.A., B.D., B.Sc.	Thesis, "A Catalogue of the Manuscripts in the Library of the Hunterian Museum in the University of Glasgow."
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## MASTERS OF ARTS (M.A.).

*November, 1906.*

## I. WITH HONOURS.

*With First-Class Honours in Modern Languages, and Second-Class Honours in Classics.*

Thomas Beaumont.

<sup>1</sup> With Special Distinction in Mathematics.<sup>2</sup> With Special Distinction in (a) Mathematics, (b) Physical Laboratory, (c) Engineering and Drawing.<sup>3</sup> With Special Distinction in (a) Physical Laboratory, (b) Geology and Mineralogy.<sup>4</sup> With Special Distinction in (a) Physical Laboratory, (b) Electricity, Pure and Applied.<sup>5</sup> With Special Distinction in (a) Natural Philosophy, (b) Physical Laboratory.<sup>6</sup> With Special Distinction in (a) Physical Laboratory, (b) Engineering and Drawing.<sup>7</sup> With Special Distinction in (a) Mathematics, (b) Physical Laboratory.<sup>8</sup> With Special Distinction in (a) Natural Philosophy, (b) Physical Laboratory, (c) Electricity, Pure and Applied.<sup>9</sup> With Special Distinction in (a) Mathematics, (b) Natural Philosophy, (c) Physical Laboratory, (d) Engineering and Drawing, (e) Engineering III.<sup>10</sup> With Special Distinction in (a) Mathematics, (b) Natural Philosophy.<sup>11</sup> With Special Distinction in Natural Philosophy.<sup>12</sup> With Special Distinction in Physical Laboratory.

*With First-Class Honours in Mathematics and Natural Philosophy.*

Elizabeth Gillics Morison.

David Norman Strathie.

*With First-Class Honours in History.*

James Keith.

*With Second-Class Honours in Classics.*

Adam Wilson Burnet.

James Dunlop Paterson.

James Carmichael.

William Gillan Waddell.

*With Second-Class Honours in Mental Philosophy.*

Joseph Cupples.

George Robert Robertson.

*With Second-Class Honours in Mathematics and Natural Philosophy.*

Alfred Ingram Steven.

*With Second-Class Honours in English.*

Octavia Jane Ronald Bennett.

*With Third-Class Honours in Classics.*

Wilfred Gerald Maclean.

*With Third-Class Honours in Mathematics and Natural Philosophy.*

Hugh Smith.

James Williamson.

## II. ORDINARY DEGREE.

William Shanks Alexander.

Margaret M'Eachern MacLeod.

Charles Hendrie Anderson.

James MacMorland.

Helen Liddell Anderson.

Annie Mitchell Macphail.

Ann Bisset.

Peter Macpherson.

Thomas Blyth.

Jeanie Douglas M'Whirter

Agnes Boyd.

John Main (Nairn).

Archibald Campbell Brown.

Walter Milburn.

Jeannie Burn.

Thomas Miller.

Daniel Cameron.

Matthew Morton Monie.

Catherine Hood Campbell.

Winifred Dougall Morison.

James Alexander Campbell.

Emily Alexandrina Moyes.

David Downie.

Douglas Alexander George Muir.

Peter Dudgeon.

Isabella Ure Nelson.

William Ewing.

Nora O'Sullivan.

James Rainy Farquhar.

Donald Patton.

William Given Ferguson.

James Macdougall Pollock.

Thomas Stobo Glen.

William Alfred Powicke.

James Good.

Berry Preston.

Thomas Forrest Harkness Graham.

Thomas Paul Simpson.

Joseph Gray.

Thomas Smith (Glasgow).

William Williamson Henderson.

John William Snodgrass.

Edith Bertha Hill.

John Aulay Steele.

John Hogg.

Clementina Mitchell Stewart.

Anna Bradshaw Irving.

George Stirling.

William George Johnston (Reuton).

Violet Binning Stirling.

Elizabeth Averill Jolly.

Maggie Telfer.

Daniel Livingstone.

Agnes Cunningham Petrie Thomson

Agnes Mary Lyon.

Catherine Spence Thomson.

Annie Wallace M'Connachie.

Robert Percy Thomson.

Gracie Smith Sloan Mackeith.

Bryce Martin Waddell.

Bertha Agnes Mackenzie.

James Mitchell Walker.

William Archibald Maclean.

Marion Aitken Wylie.

April, 1907.

I. WITH HONOURS.

*With First-Class Honours in Classics.*

John Hamilton Maxwell.

John Carter Rollo.

William Morton Ogilvy.

Francis Mackenzie Smith.

*With First-Class Honours in Mental Philosophy.*

William M'Kelvie.

*With First-Class Honours in Modern Languages.*

Mary Fullarton Armour.

*With Second-Class Honours in Classics.*

Mungo Tennent Archibald.

John Charles Watson.

James Ballantyne.

*With Second-Class Honours in Mathematics and Natural Philosophy.*

James Robert Brown.

Finlay M'Culloch.

II. ORDINARY DEGREE.

Mary Gardner Aitken.

Daniel Harper Gerrard.

Jane Alexander.

John Gibson.

Peter Allan.

James M'Farlane Grier.

Jeanie Campbell Anderson.

James Hair.

Arthur Andrews.

Jane Hamilton.

James Baird (Cumnock).

Percy Douglas Hamilton.

Jemima Barrie.

Robert Russell Hamilton.

William James Baxter.

William Smith Hamilton.

Jessie Dougall Borthwick.

Alexander Bain Harper.

Andrew Boyd.

Adelaide Henderson.

Jane Dunsmuir Boyd.

William Higgins.

John Smith Boyd.

Matthew Barr Houston.

James Rossie Brown.

John Rankin Hughes.

John Brown.

Mary Louise Hutton.

William Brown.

John Kaye.

Archibald Browning.

David Kennedy (Cumnock).

Charles Cameron.

William Kennedy.

Ian Cameron.

Dugald Macfie Kerr.

Aaron Cantor.

Jane Arbuthnot Knox.

Margaret Elizabeth Clark.

Arthur Patrick Love.

William Young Colquhoun.

William Mitchell Lyle.

Jane M'Intyre Condie.

James Robert Lyons, B.L.

William David Congalton.

James Parker Macaulay.

John Blair Cook.

John M'Beath.

Robert Barr Cornock.

Mary Robertson M'Bride.

Peter Buchan Watson Cowie.

Elizabeth M'Creadie.

Francis Davidson.

Margaret M'Gill.

Robert Chapman Davie.

Kate Laura M'Gown.

Janet Dodd.

Kate Marion Macintyre.

James Egans.

Donald Mackinnon (Maryhill).

Catherine Niven Falconer.

William M'Nicol.

Mary Christie Ferguson.

John Macpherson.

James Wilkie Findlay.

Thomas M'Vittie.

Marion Carrick Forster.

James Gemmels Marr.

John Galt.

Edward Smith Matthew.



Norman Alexander Millar.	Alexander Sinton.
David Miller.	Alexander Skeil.
Moses Miller.	James Jackson Smith.
George Stanley Milne.	Robert Smellie Sommerville.
Adam Brownlie Mitchell.	Annie Watson Spence.
Margaret Cochran Mitchell.	Donald Stalker.
David Morton (Moniaive).	Campbell Stephen.
Lilias Fairlie Munn.	Ann Margaret Stewart.
Thomas Notman.	James Stratton.
Daniel Grant O'Brien.	Barbara Sutherland.
Andrew Paterson.	Donald Sutherland.
Louis Carrick Phillips.	John William Taylor.
Janet Young Johnston Picken.	Sarah Maclachlan Taylor.
Janet Margaret Rae.	Robert John Thomson.
Agnes Connel Ramsay.	John Anderson Turner.
Marion Young Reid.	Susan Barr Vallance.
John Geddes Ritchie.	Sydney Rupert Ward.
James Charles Ross.	Barbara Fyfe Watson.
Lily Ross.	James Watson.
Margaret Jardine Routledge.	Edith Mary Whitson.
Edward Stuart Russell.	Robert Wood.
Duncan Wilkieson Semple.	Robert Gilmour Wylie.
William Shankland.	Matthew Wylie.
Thomas Shanks.	Sophie Yates.
Robert Sheridan.	Annie Muirhead Young.
William Sim.	Fergus Hay Young.
Jane Simpson.	

## DIPLOMA IN EDUCATION.

*November, 1906.**Diploma with Distinction in Classics.*

Euphemia Wenna Sutherland, M.A.

*Diploma with Distinction in Mathematics.*

Jane Helen Ross, M.A., B.Sc.

*Diploma with Distinction in Science.*

Andrew Donald, M.A., B.Sc.

*Diploma with Distinction in English, including History.*

Octavia Jane Ronald Bennett, M.A.      George Frank Clark, M.A.

*General Diploma.*

Elizabeth Rankin M'Leau, M.A.      Annie Thomson, M.A.

*April, 1907.**Diploma with Distinction in (a) Classics, (b) English, including History.*

Clarence James Vincent, M.A.

*Diploma with Distinction in Classics.*

James Mathie Barclay, M.A.      James Carmichael, M.A.

*Diploma with Distinction in Mathematics.*

Elizabeth Gillies Morison, M.A.

*Diploma with Distinction in English, including History.*

Charles Cullen, M.A.

Isabel Margaret Milligan, M.A.

*Diploma with Distinction in French and German.*

Janey Aitken Keddie, M.A.

*General Diploma.*

Joseph Gray, M.A.

Margaret Gibson Russell, M.A.

Charles Maclean, M.A.

William Wylie Stewart, M.A.

Annie Mitchell Macphail, M.A.

FIRST, SECOND, THIRD, AND FOURTH PROFESSIONAL EXAMINATIONS  
FOR M.B., CH.B.

The following passed with distinction in the subjects indicated :

## FIRST EXAMINATION.

*October, 1906.*

In Botany and Physics—James Hendry, M.A., Thomas Jones Mackie, Andrew Bruce MacLean; in Zoology and Chemistry—David Thomas Crichton Frew; in Physics and Chemistry—James Jack; in Botany—James Turner Brown; in Zoology—Samuel Bryson, Jeanie Douglas McWhirter, Barbara Grace Rutherford, Florence Elizabeth Sexton; in Physics—David Rutherford Adams, Hugh Forrest, Andrew Garvie, Nicolas Gebbie, John Gray, Andrew Ross Muir, Daniel Wright Ritchie, Gilbert Innes Strachan, James Douglas Walker, Alexander Stewart Wilson, Henry Yellowlees; in Chemistry—Peter Drummond, William Howat, M.A., Harold Edward Whittingham.

*April, 1907.*

In Zoology and Chemistry—Thomas Stewart Barrie, William Mc Murray, James Eric Paterson; in Physics and Chemistry—William Larinour Anderson; in Botany—Charles Averill; in Zoology—Thomas Adam, M.A., James Turner Brown, Charles Cameron, Kinloch Falconer, John Radcliffe Grice, M.A., James David MacKinnon, Andrew Bruce MacLean, William Wylie MacNaught, Farquhar Matheson, James Alexander Hamilton Telfer, Alexander Stewart Wilson; in Physics—Andrew Scobie Findlay, John Mitchell; in Chemistry—Alexander Baird, John Campbell, Malcolm Sommerville, William Tudhope, Gordon Alexander Valentine.

## SECOND EXAMINATION.

*October, 1906.*

In Physiology—Arthur Turnbull, M.A.; in Materia Medica and Therapeutics—John Fortheringham, B.Sc., Walter Hermann Kiep, Robert Macnair Walker.

*April, 1907.*

In Physiology—Charles Duguid, M.A., Donald Fisher, George Fletcher, M.A., William McAdam, M.A., John Hart McNicol, Mary Cochran Mitchell, Margaret Eason Robertson, Alfred Roemmele, William Wilson Rorke, Richmond Steel, David Campbell Suttie, James Lachlan Ure; in Materia Medica and Therapeutics—George Macleod, M.A.

## THIRD EXAMINATION.

*October, 1906.*

In Pathology and in Medical Jurisprudence and Public Health—John Clark Middleton, M.A., B.Sc.; in Pathology—Matthew Young; in Medical Jurisprudence and Public Health—Alexander Wylie Eadie, Hugh Johnstone Thomson.

*April, 1907.*

In Pathology and in Medical Jurisprudence and Public Health—John Cruickshank, Robert Macnair Walker; in Pathology—Charles Bennett, William Barrie Brownlie, Peter Russell M'Naught, Ralph Montgomery Fullarton Picken, B.Sc.; in Medical Jurisprudence and Public Health—Benjamin Hutchison, Archibald Campbell Munro, Adam Patrick, M.A.

## FOURTH EXAMINATION.

*July, 1906.*

In (a) Surgery and Clinical Surgery, (b) Practice of Medicine and Clinical Medicine—Charles Samson Thomson. In (a) Practice of Medicine and Clinical Medicine, (b) Midwifery—William Smellie. In Surgery and Clinical Surgery—James M'Farlane, Elizabeth Maud M'Vail, Peter Mitchell, M.A.; Agnes Picken, M.A.; John Stevenson, John Young (Mount Vernon), Morris Youdelevitz Young. In Practice of Medicine and Clinical Medicine—John Anderson, M.A., B.Sc.; Arthur Muir Crawford, James Richan Drever, M.A.; Arnold Harris Gray, William James Rutherford. In Midwifery—Andrew Alexander M'Whan, James Stevenson, George Haswell Wilson.

*October, 1906.*

In (a) Practice of Medicine and Clinical Medicine, (b) Midwifery—James Kennedy Welsh.

## FOURTH EXAMINATION FOR M.B., C.M.

*July, 1906.*

In (a) Surgery and Clinical Surgery, (b) Practice of Medicine and Clinical Medicine—Robert Stewart M'Kim, M.A.

## BURSARY COMPETITION.

*October, 1906.*

The figure (2) denotes students of the second year.

The following are the first fifty-three names in the order of merit, viz.

1. George A. Johnston, High School, Glasgow.
2. James B. Hutton, Dollar Institution.
3. Robert Thomson (2), Kilmarnock Academy.
4. Caleb A. Stewart (2), High School, Glasgow.
5. William S. Buchan, Spier's School, Beith.
6. John Smith (2), Hutchesons' Grammar School, Glasgow.
7. Isabel Robertson, Hillhead High School, Glasgow.
8. John Agnew, Grammar School, Campbeltown, and Public School, Glenbarr.
9. William Kerr, High School, Stirling.
10. James Stothers (2), Hamilton Academy.
11. Tom D. Miller, High School, Glasgow.

12. Robert Clark, Hamilton Academy.
13. John T. Black (2), Ayr Academy.
14. Farquhar Matheson (Glasgow), Hutchesons' Grammar School, Glasgow.
15. Annie I. Henderson (2), The Park School, Glasgow.
16. John Paterson (Rothesay), Rothesay Academy.
17. Peter Revie, Grammar School, Campbeltown.
18. James Baillie, Paisley Grammar School.
19. Ernest Evans, Potteries Pupil Teachers' Centre, Hanley.
20. Jeanie B. Trench, Girls' High School, Garnethill, Glasgow.
21. John P. Weir, Academy School, Beith.
22. Andrew D. Gibb, Trinity College, Glenalmond.
23. James M. Wordie, Glasgow Academy.
24. Jeannie Sutherland, Girls' High School, Garnethill, Glasgow.
25. Thomas Aitkenhead, Higher Grade School, Clydebank.
26. James S. Weir, Academy School, Beith.
27. David Buchanan, Greenock Academy.
28. Benjamin M'Kenna, Fairfield Higher Grade School, Govan.
29. Janet C. Reid, Ardrossan Academy.
30. James A. M'Cardel, Pupil Teachers' Institute, Glasgow.
31. Matthew W. Macaulay, Hutchesons' Grammar School, Glasgow.
32. William D. M. Williamson, George Watson's College, Edinburgh.
33. John R. Herbertson, Glasgow Academy.
34. Stuart C. Parker, Hutchesons' Grammar School, Glasgow.
35. Peter A. C. Milne, Hutchesons' Grammar School, Glasgow.
36. James Manson, High School, Glasgow.
37. William M. Smart, MacLaren High School, Callander.
38. William S. Kerr, Kent Road Public School, Glasgow.
39. William V. Forrest (2), Greenock Academy.
40. Daniel A. Forrest, Hamilton Academy.
41. James M. M'Phail, North Kelvinside Higher Grade School, Glasgow.
42. James O. Erskine, Paisley Grammar School.
43. Robert T. Clark, Perth Academy.
44. Robert Brown, Holmseroft Higher Grade School, Greenock.
45. Isabella F. Dove (2), Hillhead High School, Glasgow.
46. John Goudie, Ayr Academy.
47. William Murray, High School, Glasgow.
48. Margaret W. Waddell, The Park School, Glasgow.
49. Norman V. Lothian, Hillhead High School, Glasgow.
50. Alexander Dingwall, Pupil Teachers' Institute, Glasgow.
51. Duncan A. M'Vean (2), Pupil Teachers' Institute, Govan.
52. David D. Anderson, High School, Glasgow.
53. Gertrude M. Milligan, Girls' High School, Garnethill, Glasgow.

#### *UNIVERSITY PRIZES.*

##### I.—FOR ESSAYS.

THE UNIVERSITY SILVER MEDAL, for the best Essay on "Bradley's Conception of Reality."

Leonard J. Russell, M.A.

THE EWING GOLD MEDAL, for the best Essay on "Fletcher of Saltoun."  
Duncan H. Neilson.

A COULTER PRIZE OF FIVE POUNDS, for the best "Exposition and Criticism of the Ritschlian Theology."

James C. M. Fairlie, M.A.

A COULTER PRIZE OF FIVE POUNDS, for the best Essay on "The History of the Colony at Cumae in Campania."

James Carmichael, M.A.

THE HENDERSON PRIZE OF TWENTY GUINEAS, for the best Essay on "The Theory of Evolution in relation to Christian Life and Doctrine."

Eric J. Roberts, M.A.

THE COBDEN PRIZE OF TWENTY POUNDS, and SILVER MEDAL, for an Essay on "The Effects of Free Trade on Ireland and the Probable Effects of a Resumption of Protection there."

Arthur E. Macgregor, M.A.

## II.—FOR EXAMINATIONS.

AN ARNOTT PRIZE of £25, for an Examination in Physiological Physics.

William M'Adam, M.A.

AN ARNOTT PRIZE of £15, for an Examination in General Physics.

Daniel W. Ritchie.

THE FINDLATER SCHOLARSHIP PRIZE, value £38, for Examination in the Subjects for the Degree of B.D.

John M. Woodburn, M.A.

THE JAMIESON PRIZE, value £10, for Examination in the Subjects for the Degree of B.D.

James H. Cockburn, M.A.

THE LUKE HISTORICAL PRIZE of £9, for the best Examination in Ancient Greek and Roman History.

Eric D. Macgregor.

THE GLADSTONE MEMORIAL PRIZE of Books to the value of £5, open to those who have taken the Degree of M.A., with Honours, or who presented themselves in October, 1906, for Examination for the Degree of M.A., with Honours in Economic Science.

Arthur E. Macgregor, M.A.

THE THOMAS LOGAN MEMORIAL MEDAL and PRIZE to the Graduate in Arts of the year 1906 with the highest marks in the Degree Examinations.

Thomas Beaumont, M.A., with First-Class Honours in Modern Languages and Second-Class Honours in Classics.

THE BRUNTON MEMORIAL PRIZE of £10, to the most distinguished Graduate in Medicine of the year 1906.

Peter Mitchell, M.A.

## III.—FOR THESES.

BELLAHOUSTON GOLD MEDALS for Eminent Merit in Theses for M.D. (alphabetically arranged.)

David Maclure Cowan, M.D.

Lizzie Thomson Fraser, M.D.

## CLASS PRIZES.

## Faculty of Theology.

## DIVINITY.

PROFESSOR H. M. B. REID, D.D.

## SENIOR CLASS.

## I. Students of the Third Year :—

1. Alexander Moffatt, M.A., Glasgow (Caird Prize of £5 5s. in Books, Cleland and Rae-Wilson Gold Medal, and Dickson Prize of £2 18s. 6d. in Books).
2. } Archibald Campbell, M.A., Eigg. } Equal.  
    } James H. Cockburn, M.A., Paisley, }
3. James C. M. Fairlie, M.A., Paisley.
4. John Macfarlane, M.A., Glasgow.
5. John M. Woodburn, M.A., Cassillis.

Honourable Mention—John Main, M.A., Nairn; George W. Walker, M.A., Glasgow.

## Dowanhill Prizes for Elocution—

1. (£20) James C. M. Fairlie, M.A.
2. (£10) Alexander Moffatt, M.A.

## II. Students of the Second Year :—

1. Robert H. Napier, M.A., Dunblane (Caird Prize of £5 5s. in Books).
2. } Andrew C. Baird, M.A., B.Sc., Airdrie. } Equal.  
    } John M. Hay, M.A., Tarbert, }
3. William D. Macgill, M.A., Irvine.
4. William Clark, M.A., Larkhall.

Honourable Mention—Robert S. Armstrong, M.A., Glasgow; Neil M'Craig, M.A., Glasgow; John Mercer Hunter, M.A., Ayr.

## III. Students of the First Year :—

1. Matthew Stewart, M.A., Glasgow.
2. John Middleton, M.A., LL.B., Glasgow.
3. Richard C. Corrie, M.A., Doncaster.
4. Andrew Templeton, M.A., Glasgow.

Honourable Mention—Robert R. Lindsay, M.A., Glasgow; Alexander MacLean, M.A., Kilmelfort; David W. McLean, M.A., Linlithgow; William M. Milne, M.A., Helensburgh.

## DIVINITY AND BIBLICAL CRITICISM.

PROFESSOR WILLIAM STEWART, D.D.

## SENIOR DIVISION.

1. James C. M. Fairlie, M.A., Paisley (Cleland and Rae-Wilson Gold Medal).
2. John M. Woodburn, M.A., Cassillis.
3. James H. Cockburn, M.A., Paisley.

Next in Order—Eric J. Roberts, M.A., Upper Norwood; Alexander Moffatt, M.A., Glasgow; John Macfarlane, M.A., Glasgow; Archibald Campbell, M.A., Eigg.

## JUNIOR DIVISION.

1. John M. Hay, M.A., Tarbert.
2. Robert H. Napier, M.A., Dunblane.
3. Andrew C. Baird, M.A., B.Sc., Airdrie.

Next in Order—William N. Bell, M.A., Glasgow; William D. Macgill, M.A., Irvine; Thomas S. Glen, M.A., Paisley; William Potter, M.A., Glasgow; William Clark, M.A., Larkhall.

## HEBREW AND SEMITIC LANGUAGES.

PROFESSOR JAMES ROBERTSON, D.D., AND THOMAS H. WEIR, B.D.

## I. SENIOR HEBREW CLASS.

1. Louis C. Phillips, Ayr (Cleland and Rae-Wilson Gold Medal).
2. Andrew C. Baird, M.A., B.Sc., Airdrie.
3. John Mercer Hunter, M.A., Ayr.
4. Neil M'Caig, M.A., Glasgow.
5. Thomas S. Glen, M.A., Paisley.
6. Robert S. Armstrong, M.A., Glasgow.

Second Year's Attendance—Robert H. Napier, M.A., Dunblane.

For Expository Essays.

Andrew C. Baird, M.A.; Robert H. Napier, M.A.

For Recitation of Selected Chapters.

Louis C. Phillips; John Mercer Hunter, M.A.

For Vacation Exercises—Essay on Ecclesiastes.

Samuel F. Hunter, M.A., Glasgow; Herbert Dunn, M.A.

Original Composition in Hebrew—Thomas S. Glen, M.A.

Summer Readings—Andrew C. Baird, M.A.; Thomas S. Glen, M.A.; Neil M'Caig, M.A.

## II. JUNIOR HEBREW CLASS.

1. James MacMorland, M.A., Straiton, Ayrshire.
2. Alexander S. Fulton, Beith.
3. Richard C. Corrie, M.A., Doncaster.
4. Thomas F. H. Graham, M.A., Port-Glasgow.
5. Alexander Mauchline, M.A., Larkhall.

For Recitation of Selected Passages.

David W. MacLean, M.A., Linlithgow; John A. Steele, M.A., Glasgow.

## III. SYRIAC CLASS.

Samuel F. Hunter, M.A., Glasgow.

Alexander Moffatt, M.A., Glasgow.

John M. Woodburn, M.A., Cassillis.

*Summer Session. 1906.*

## PREPARATORY HEBREW.

Louis C. Phillips, Ayr.

## HONOURS HEBREW.

Samuel F. Hunter, M.A., Glasgow.

## ARABIC.

Adam B. Stewart, M.A., Glasgow.

## CHURCH HISTORY.

PROFESSOR JAMES COOPER, D.D.

## I. SENIOR CLASS.

1. James H. Cockburn, M.A., Paisley (Cleland and Rae-Wilson Gold Medal).
2. John M. Woodburn, M.A., Cassillis.
3. John Main, M.A., Nairn.
4. Alexander Moffatt, M.A., Glasgow.
5. John Macfarlane, M.A., Glasgow.

## SUBSEQUENT ORDER.

George W. Walker, M.A., Glasgow; John A. Swan, M.A., Greenock; Archibald Campbell, M.A., Eigg; Herbert Dunn, M.A., Glasgow; James F. M'Creath, M.A., Newton-Stewart; Archibald Montgomery, Gareloch-head.

## II. JUNIOR CLASS.

1. Robert R. Lindsay, M.A., Glasgow.
2. David W. M'Lean, M.A., Linlithgow.
3. Andrew Templeton, M.A., Glasgow.
4. William K. White, Ayr.
5. Richard C. Corrie, M.A., Doncaster.

## SUBSEQUENT ORDER.

James MacMorland, M.A., Straiton; Matthew Stewart, M.A., Glasgow; Alexander MacLean, M.A., Kilmelfort; John A. Steele, M.A., Glasgow; William Whitehead, M.A., Port-Glasgow; John Middleton, M.A., LL.B., Glasgow.

## SPECIAL PRIZES FOR ESSAYS.

John A. Steele, M.A., Glasgow.  
 Thomas F. H. Graham, M.A., Port-Glasgow.

## Faculty of Law.

## SCOTS LAW.

PROFESSOR WILLIAM M. GLOAG, B.A.

## I. For Eminence in Class Examinations:—

## Prizemen.

1. James A. Gordon (Robert Ross Prize).
2. David J. Wallace, M.A.
3. John Hogg, M.A.
4. James Adair.
5. William B. Hardie.

## Honours (in alphabetical order).

James C. Burton, M.A.  
 Joseph Davidson, M.A.  
 Charles G. Fergusson.  
 William Gillies, M.A.

James Keith, M.A.  
 William M. Lyle.  
 David M'Gill.  
 George T. Walker.



## II. For Eminence in Examination for Prizes given by the Faculty of Procurators in Glasgow:—

### Prizemen.

1. James A. Gordon.
2. James Adair.

3. David M'Gill.
4. John Hogg, M.A.

### Honours (in alphabetical order).

- Charles G. Fergusson.  
William B. Hardie.  
William M. Lyle.

- George W. Murray.  
David J. Wallace, M.A.

## CONVEYANCING.

### PROFESSOR JAMES MOIR, LL.D.

#### Prizemen.

1. James M'Intosh, M.A., Glasgow (Robert Ross Prize).
2. Walter Hubbard, M.A., Glasgow.
3. Robert Burns, M.A., Larkhall.
4. William Jack, M.A., Motherwell.

#### Eminently Distinguished.

5. George N. Morrison, B.A., Dunblane.
6. Thomas D. K. Murray, M.A., B.Sc., Glasgow.
7. { James Robertson, Kilmarnock.
7. { Robert Browning, M.A., Glasgow.
9. William Pitcairn, Hawick.
10. John M'Nay, Giffnock.

### Examination for Prizes given by the Faculty of Procurators in Glasgow.

#### Prizemen.

1. Robert Browning, M.A.
2. Walter Hubbard, M.A.
3. Robert Burns, M.A.

#### Eminently Distinguished.

4. James Robertson.
5. William Jack, M.A.
6. William Pitcairn.

## CIVIL (OR ROMAN) LAW.

### Lecturer—JAMES M. IRVINE, LL.B., Advocate.

- |                          |                           |
|--------------------------|---------------------------|
| 1. *Harold M'Intosh.     | 8. James Y. Reid.         |
| 2. *John W. Taylor.      | 9. { Ralph E. May.        |
| 3. *George Stevenson.    | 9. { Alexander C. Wilson. |
| 4. Donald Stalker.       | 11. James K. Walker.      |
| 5. James Keith, M.A.     | 12. John Hogg, M.A.       |
| 6. { William Kennedy.    | 13. Colin Sinclair.       |
| 6. { Francis W. J. Reid. | 14. Ian Cameron.          |

\* The asterisk denotes the prizemen.

## PUBLIC INTERNATIONAL LAW.

### Lecturer—A. H. CHARTERIS, LL.B.

#### First-Class Certificates.

- Thomas D. K. Murray, M.A., B.Sc. (First Prize).  
John N. Orr, M.A. (Second Prize).  
Douglas S. Dickson, M.A.  
James M'Intosh, M.A.

## INTERNATIONAL PRIVATE LAW

*Summer Session, 1906.*

Lecturer—A. H. CHARTERIS, LL.B.

Prizes.

1. James McIntosh, M.A.
2. Robert Burns, M.A.

First-Class Certificates.

3. { Walter Hubbard, M.A.,  
Thomas D. K. Murray, M.A., B.Sc., } Equal.
4. John R. Blackwood, M.A.
5. George N. Morrison, B.A.

## JURISPRUDENCE.

Lecturer—JAMES A. McCALLUM, LL.B.

1. Robert Burns, M.A. (First Prize).
2. John Hogg, M.A. (Second Prize).
3. John R. Blackwood, M.A.
4. Alexander Hynd, M.A.

## CONSTITUTIONAL LAW AND HISTORY.

Lecturer—WILLIAM S. McKECHNIE, LL.B., D.Phil.

Honours Class.

1. John Tannah (Prize).
2. Jessie D. Borthwick.
3. Andrew D. Hareus.
4. Tennant Sloan, M.A.

Ordinary Class.

1. Ebenezer M. Macharg, M.A. (First Prize).
2. Annie Thomson, M.A. (Second Prize).
3. William Paterson (Third Prize).
4. Douglas S. Dickson, M.A.
5. David N. Strathie, M.A.
6. James J. Smith.
7. Thomas L. Galloway, B.A.

## MERCANTILE LAW.

Lecturer—WILLIAM SHAW.

Prizes.

1. James A. Gordon.
2. Geoffrey G. Rowbotham.
3. John A. Craig.

Highly Distinguished.

1. { William B. M. Bell.  
William Pirie.
3. { Alexander A. Fairnie.  
Frederick G. Pearson.
5. John J. Dunlop.
6. { Alexander Morrison.  
Kenneth MacGibbon.  
Robert S. Smith.
9. Thomas M'Laren.
10. { Robert Harvie.  
John Haydoch.  
Alexander Reid.
13. Thomas N. Scott.
14. { Moses L. Williamson.  
John R. Young.
16. Steven J. L. Hardie.

## FORENSIC MEDICINE.

PROFESSOR JOHN GLAISTER, M.D., D.P.H. (Camb.), F.R.S.E.

## First-Class Certificates.

1. Walter Henderson, M.A., (Medallist).
2. Robert Browning, M.A.
3. John R. Blackwood, M.A.
4. { Douglas S. Dickson, M.A., } Equal.  
    { John W. Taylor, }
5. George N. Morrison, B.A.
6. { James C. MacGregor, M.A., } Equal.  
    { James M'Intosh, M.A., }

## EVIDENCE AND PROCEDURE.

Lecturer—ROBERT LAMOND, LL.B.

*Summer Session, 1905.*

- |                        |                   |
|------------------------|-------------------|
| 1. Edward D. Anderson. | 3. David Linning. |
| 2. William Thompson.   |                   |

*Summer Session, 1906.*

1. Morton M. Muir, LL.B. (Prizeiman).
2. { Harold R. Bird, } Equal.  
    { James W. Millen, LL.B., }

## Faculty of Medicine.

## MEDALS AND CERTIFICATES OF MERIT.

## SURGERY.

PROFESSOR SIR WILLIAM MACEWEN, M.D., LL.D., D.Sc. (Oxon.), F.R.S.

## First-Class Certificates.

- |   |                       |
|---|-----------------------|
| 1. { Ralph M. F. Picken, B.Sc., }<br>{ William C. Gunn, } Equal (Medals).<br>{ Thomas Miller, M.A., } | 4. Berkeley Gale.     |
| 2. Allison D. M'Lachlan.  | 5. Robert M. Walker.  |
| 3. William Barr.  | 6. John M'Vittie.     |
|   | 7. Robert I. Binning. |

## Commendation Certificates.

- |  |   |
|--|---|
| 1. John C. Middleton, M.A., B.Sc.  | 4. { John Cruickshank, }<br>{ Thomas Forsyth, } Equal.<br>{ James H. Martin, }<br>{ Horatio Matthews, } |
| 2. Samuel Wilson, M.A.   |   |
| 3. { William Brown, M.A., B.Sc., }<br>{ Adam Patrick, M.A., } Equal.<br>{ Neil C. Scott, } | 5. { John Allan, }<br>{ John A. Doctor, } Equal.  |

## OPERATIVE SURGERY.

PROFESSOR SIR WILLIAM MACEWEN, M.D., LL.D., D.Sc. (Oxon.), F.R.S.

*Summer Session, 1906.*

## Demonstrators.

Thomas Barbour, M.A., B.Sc.	Arnold H. Gray.
John M. H. Caldwell.	Robert N. Guthrie.
William A. Campbell.	James D. Kidd.
James Coutts.	William J. Rutherford.
Arthur M. Crawford.	Charles S. Thomson.
James R. Drever, M.A.	George H. Wilson.

## SENIORS.

## First-Class Certificates.

1. { John Anderson, M.A., B.Sc., } Equal (Medals).  
    { Morris Y. Young,
2. { James M. Anderson, } Equal.  
    { Matthew J. Stewart, }
3. Hugh Morton.
4. { Robert Donald, } Equal.  
    { James M'Farlane, }
5. Charles A. Crichtow.
6. Archibald Hogg.

## Commendation Certificates.

1. { William A. M'Kellar, } Equal.  
    { Thomas H. Rankin. }

## JUNIORS.

## First-Class Certificates.

1. David Arthur, B.Sc. (Medal).
2. Horatio Matthews.
3. { George V. Anderson, } Equal.  
    { William Brown, M.A., B.Sc., }
4. { Robert C. Muir, } Equal.  
    { Samuel Wilson, M.A., }

## Commendation Certificates.

1. { James R. Craig, } Equal.  
    { Neil MacInnes, M.A., }
- { James R. Mitchell, }

## CLINICAL SURGERY.

PROFESSOR SIR WILLIAM MACEWEN, M.D., LL.D., D.Sc. (Oxon.), F.R.S.

*Summer Session, 1906.*

## JUNIOR DIVISION.

## First-Class Certificates.

1. Charles Duguid, M.A. (Medal).
2. John M'Vittie.
3. { David Arthur, B.Sc., } Equal.  
    { I. Carswell Marshall, }
4. William C. Gunn.

## Commendation Certificates.

1. Samuel Wilson, M.A.
2. { Henry M. Granger, } Equal.  
  { Hugh Morton, }
3. James R. Craig.

## Out-door Dressers.

David Arthur, B.Sc.	Ernest B. Macaulay.
James R. Craig.	Robert M. Morison, M.A.
Charles Duguid, M.A.	Hugh Morton.
William M. Fairlie.	Robert C. Muir.
Henry M. Granger.	Adam Patrick, M.A.
William C. Gunn.	Robert M. Walker.
Stephen J. Henry.	John Weir.
Andrew J. Hutton.	Hugh M. Wilson.
George Ligertwood.	Samuel Wilson, M.A.
Crawford Lundie.	

## SENIOR DIVISION.

## First-Class Certificates.

1. David L. Tate (Medal).
2. { Ernest M. Eaton, } Equal.  
  { Arnold H. Gray, }
3. Thomas Barbour, M.A., B.Sc.
4. William H. Manson, M.A.
5. Thomas M'Crick, M.A., B.Sc.

## Commendation Certificates.

1. { John R. M'Gilvray, } Equal.  
  { William Gilbert, }
2. Archibald Y. Hutchison.

## In-door Dressers.

John Anderson, M.A., B.Sc.	William H. Manson, M.A.
Thomas M'Crick, M.A., B.Sc.	John Stevenson.
James M'Farlane.	

## Out-door Dressers.

William Gilbert.	John Turnbull.
Norman S. MacNaughtan.	John Young

*Winter Session, 1906-7.*

## Clinical Reporter—John Stevenson.

## JUNIOR DIVISION.

## First-Class Certificates.

1. Josiah S. Harbinson (Medal).
2. Charles Duguid, M.A.
3. William H. S. Armstrong
4. James Cook (Partick).

## Commendation Certificates.

1. { John Allan, } Equal.  
  { David N. Knox, }
2. John W. M'Nee.

## SENIOR DIVISION.

## First-Class Certificates.

1. { William C. Gunn, } Equal  
  { William B. Brownlie, } (Medals).
2. Campbell K. Stevenson.
3. { Robert I. Binning, } Equal.  
  { Wm. Brown, M.A., B.Sc., }
4. { John M'Vittie, } Equal.  
  { John C. Middleton, }  
  { M.A., B.Sc., }
5. { Arthur D. Downes, M.A., } Equal.  
  { Kenneth C. Middlemiss, }

## Commendation Certificates.

- |                      |          |                       |
|----------------------|----------|-----------------------|
| 1. John Cruickshank, | } Equal. | 2. Robert M. Walker.  |
| { Berkeley Gale,     |          | 3. Adam Patrick, M.A. |

## Certificates on Anaesthetics.

Wallace W. Adamson.	Archibald Hogg.
John Anderson, M.A., B.Sc.	John Lang.
Alexander J. Couper.	Allison D. McLachlan.
John Cruickshank.	Horatio Matthews.
John A. Doctor.	Thomas Miller, M.A.
Thomas Forsyth.	John A. Thomson.
Robert Govan.	John S. Thomson.
James D. Gray.	Robert M. Walker.
William C. Gunn.	

## CLINICAL SURGERY.

PROFESSOR SIR HECTOR C. CAMERON, M.D.

*Summer Session, 1906.*

## Certificates of Merit.

Charles A. Crichtlow.	Daniel M. Reid.
William Brown, M.A., B.Sc.	Walter H. Kiep.
William J. Rutherford.	John W. M'Nee.

*Winter Session, 1906-7.*

Medal—John M. Henderson.

## Certificates of Merit.

Douglas M. Borland.	William A. Sewell.
Albert W. Gregorson.	

## PRACTICE OF MEDICINE.

PROFESSOR SIR THOMAS M'CALL ANDERSON, M.D.

## SENIOR DIVISION.

Medal—David A. Thomson, M.A.

## First-Class Certificate.

Archibald Hogg.

## JUNIOR DIVISION.

Gairdner Medal—Matthew J. Stewart.

## First-Class Certificates (in order of merit).

- |                        |                        |
|------------------------|------------------------|
| 1. Hugh J. Thomson.    | 4. William Barr.       |
| 2. Robert Govan.       | 5. David Arthur, B.Sc. |
| 3. Thomas H. Campbell. |                        |

## CLINICAL MEDICINE.

PROFESSOR SIR THOMAS M'CALL ANDERSON, M.D.

*Summer Session, 1906.*

First-Class Certificates (in order of merit).

## SENIORS.

Alister A. C. M'Neill.  
Lawrence Storey.  
Robert Donald.

John Miller.  
Matthew Young.  
Alexander Scott.

## JUNIORS.

George M. Fraser, M.A.  
William L. Forsyth.

Thomas P. Grant.

*Winter Session, 1906-7.*

## SENIORS.

Medal—George M. Fraser, M.A.

First-Class Certificates (in order of merit).

John Stewart, M.A., B.Sc.  
Hugh M. Wilson.

Samuel Wilson, M.A.

## JUNIORS.

Medal—William Rutherford.

First-Class Certificates (in order of merit).

Hyacinth B. W. Morgan.  
John A. M. Cameron.

John L. Boyd,  
James B. Galbraith, } Equal.

## CLINICAL MEDICINE.

PROFESSOR SAMSON GEMMELL, M.D.

*Summer Session, 1906.*

First-Class Certificates (in alphabetical order).

Robert I. Binning.  
Arthur M. Crawford.  
James R. Drever, M.A.  
Charles F. D. Hammond.  
James D. Kidd.

Robert S. M'Kim, M.A.  
Thomas Miller.  
Matthew J. Stewart.  
James K. Welsh.

*Winter Session, 1906-7.*

## SENIORS.

Medallist—Matthew J. Stewart.

First-Class Certificates (in alphabetical order).

David Arthur, B.Sc.  
Charles A. Crichtlow.  
William M. Elliott.

Hugh Morton.  
Alexander Scott.

## JUNIORS.

Medallist—Hugh C. Storrie.

First-Class Certificate.

Kenneth C. G. Gray.

## MIDWIFERY.

PROFESSOR MURDOCH CAMERON, M.D.

Medallist—Matthew J. Stewart.

## First-Class Certificates (alphabetically arranged).

Alexander Anderson.	Thomas Miller, M.A.
James Cook (Partick).	Donald Stewart.
John A. Doctor.	Hugh M. Wilson.
Archibald Hogg.	Samuel Wilson, M.A.
James H. Martin.	Matthew Young.

## Second-Class Certificates (alphabetically arranged).

Thomas Archibald.	Josiah S. Harbinson.
James Carriek.	Charles L. Kerr.
Arthur D. Downes, M.A.	Adam Patriek, M.A.
James Cook (Coalburn).	Thomas D. C. Ross.
William C. Gunn.	Robert M. Walker.

## DISEASES OF WOMEN.

PROFESSOR MURDOCH CAMERON, M.D.

*Summer Session, 1906.*

## First-Class Certificates (alphabetically arranged).

Thomas H. Campbell.	John C. Middleton, M.A., B.Sc.
James R. Drever, M.A.	John Miller.
Allison D. M'Lachlan.	Matthew Young.

## Second-Class Certificates (alphabetically arranged).

William R. Cammock.	William H. Manson, M.A.
Charles A. Crichtow.	Hugh Morton.
John A. Doctor.	Patrick J. O'Hare.
Robert S. M'Kim, M.A.	William Smellie.

## INSANITY.

Lecturer—LANDEL R. OSWALD, M.B.

*Summer Session, 1906.*

Mackintosh Bursary—Thomas Miller.

## First-Class Certificates (alphabetically arranged).

William Barr.	Jane I. Robertson, M.A.
Thomas Miller.	Adam Patriek, M.A.
Robert M. Morison, M.A.	

## Second-Class Certificates.

John Cruickshank.	William A. Muir.
Benjamin Hutchison.	Ralph M. F. Picken, B.Sc.
Annie M'Crorie.	David Taylor.
Peter R. M'Naught.	Robert M. Walker.
Phiroza B. Malabari.	



## DISEASES OF THE EAR.

Lecturer—THOMAS BARR, M.D.

*Summer Session, 1906.*

## Prizes.

John Cruickshank.

Alexander T. I. Macdonald.

## First-Class Certificates.

Alexander T. A. Gourlay.

John W. Miller.

Robert S. Taylor.

John C. Middleton, M.A., B.Sc.

Campbell K. Stevenson.

George M. Fraser, M.A.

Robert C. Muir.

William M. Elliott.

*Winter Session, 1906-7.*

## Prizes.

Wallace W. Adamson.

Ralph M. F. Picken, B.Sc.

## First-Class Certificates.

Neil C. Scott.

Hugh C. Storrie.

## DISEASES OF THE THROAT AND NOSE.

Lecturer—JAMES WALKER DOWNIE, M.B.

*Summer Session, 1906.*

## First-Class Certificates (in order of merit).

Campbell K. Stevenson.

John Cruickshank,

Frank R. Wilson.

Alexander T. I. Macdonald, } Equal.

Alexander J. Couper, } Equal.

James H. Martin,

Charles A. Crichton,

William Brown, M.A., B.Sc.

## Second-Class Certificates (in order of merit).

Geoffrey B. Fleming,

John C. Middleton, M.A., B.Sc.,

Hugh J. Thomson,

John A. Thomson,

Thomas D. C. Ross,

Henry M. Granger,

John V. Grant,

Peter R. McNaught, } Equal.

*Winter Session, 1906-7.*

## First-Class Certificates (in order of merit).

John Oswald.

Adam Patrick, M.A.

John A. Struthers.

Neil C. Scott.

## Second-Class Certificates (in alphabetical order).

Donald Duncan.

Thomas Miller, M.A.

William H. Duncan.

James B. Sim.

Leonard J. Dunstone.

Garabed Y. Yardumian.

John Lang.

## PATHOLOGY.

PROFESSOR ROBERT MUIR, M.A., M.D.

Medallist—John Cruickshank.

First-Class Certificates (in order of merit).

- |   |   |
|---|---|
| 1. John Cruickshank.                                    | 8. William B. Brownlie.   |
| 2. William Barr.  | 9. { John L. Boyd,<br>Ralph M. F. Picken,<br>B.Sc.,<br>Donald Stewart, } Equal. |
| 3. { Robert M. Morison, M.A.,<br>David Taylor, } Equal. |   |
| 5. { William Anderson,<br>Archibald C. Munro, } Equal.  |   |
| 6. { Robert M. Walker, }                                |   |

Second-Class Certificates (in order of merit).

- |   |  |
|---|--|
| 12. { Walter Gilmour,<br>William A. Muir,<br>Adam Patrick, M.A.,<br>Nicol M. Rankin,<br>Hugh C. Storrie, } Equal. | 20. { John Blakely,<br>John MacMillan, } Equal.                            |
| 17. { James Cook (Partick),<br>Benjamin Hutchison, } Equal.   | 22. { Hector M. Calder,<br>James W. M'Leod,<br>Hugo G. Robertson, } Equal. |
| 19. John S. Thomson.  | 25. { Walter H. Kiep,<br>Murdo D. Mackenzie, } Equal.                      |

## PRACTICAL PATHOLOGY.

PROFESSOR ROBERT MUIR, M.A., M.D.

*Summer Session, 1906.*

Medallist—William B. Brownlie.

First-Class Certificates (in order of merit).

- |                              |   |
|------------------------------|---|
| 1. William B. Brownlie.      | 5. { Arthur D. Downes, M.A.,<br>William L. Forsyth,<br>James W. M'Leod,<br>Adam Patrick, M.A., } Equal. |
| 2. Ralph M. F. Picken, B.Sc. |   |
| 3. Peter R. M'Naught.        |   |
| 4. Frank N. Marsh.           |   |

Second-Class Certificates (in order of merit).

- |   |  |
|---|--|
| 6. Donald Stewart.  | 11. { John L. Boyd,<br>John S. Thomson, } Equal.   |
| 7. { Hugh M. Gossman,<br>Hugh C. Storrie,<br>Robert M. Walker, } Equal. | 12. Alexander M. Kennedy.  |
| 8. John Cruickshank.  | 13. { William Anderson,<br>John Fotheringham,<br>B.Sc.,<br>John Lang,<br>Arthur Turnbull, M.A., } Equal. |
| 9. { Benjamin Hutchison,<br>John Weir, } Equal.                         |  |
| 10. Robert D. B. Frew.  |  |

## MEDICAL JURISPRUDENCE AND PUBLIC HEALTH.

PROFESSOR JOHN GLAISTER, M.D., D.P.H. (Camb.), F.R.S.E.

*Summer Session, 1906.*

First-Class Certificates (in order of merit).

- |                                   |   |
|-----------------------------------|---|
| 1. Frank N. Marsh—Medallist.      | 5. { Peter R. M'Naught,<br>Robert M. Walker, } Equal. |
| 2. John C. Middleton, M.A., B.Sc. | 6. { William Barr,<br>James Cook (Partick), } Equal.  |
| 3. Benjamin Hutchison.            |   |
| 4. Neil C. Scott.                 |   |

## Second-Class Certificates (in order of merit).

- |     |  |        |     |   |        |
|-----|--|--------|-----|---|--------|
| 7.  | { Wm. H. S. Armstrong,<br>Donald J. Clark,<br>Robt. M. Morison, M.A.,<br>Archibald C. Munro,<br>Adam Patrick, M.A.,<br>John Cruickshank. } | Equal. | 11. | { John MacMillan,<br>John Young,<br>James Carrick,<br>John Fotheringham.<br>B.Sc.,<br>William A. Muir, }  | Equal. |
| 8.  | { Ralph M. F. Picken, B.Sc.,<br>Hugh C. Storrie, }   | Equal. | 12. | { William A. Muir,<br>Arthur D. Downes, M.A.,<br>William B. Brownlie,<br>Thomas Archibald,<br>Hector M. Calder,<br>Thomas S. Fleming,<br>John Weir, } | Equal. |
| 9.  | { William C. Whittingham, }  | Equal. | 13. |   |        |
| 10. | { Joseph G. M'Cutcheon,<br>James W. M'Leod, }  | Equal. | 14. |   |        |
|     |  |        | 15. |   |        |

## ANATOMY.

PROFESSOR JOHN CLELAND, M.D., LL.D., D.Sc., F.R.S.

## SENIORS.

Medal—William M'Adam, M.A.

## First-Class Certificates.

John A. M. Cameron.  
George Macleod, M.A.  
William Rutherford.

Charles Duguid, M.A.  
William Howat, M.A.  
Hyacinth B. W. Morgan.

## Second-Class Certificates.

James K. Dunlop, M.A.  
Robert Gale.

Carl J. B. Buchheim.

## JUNIORS.

Medal—Thomas J. Mackie.

## EMBRYOLOGY.

Lecturer—JAMES F. GEMMILL, M.A., M.D.

*Summer Session, 1906.*

## First-Class Certificates (in order of merit).

1. William M'Adam, M.A. (Prize).
2. { John A. M. Cameron,  
James L. Ure,  
Harold E. Whittingham, }
- Equal.
5. David T. C. Frew.

## PHYSIOLOGY.

PROFESSOR D. NOËL PATON, B.Sc., M.D.

John Hunter Medal and First-Class Certificate.

James Dunlop, M.A.

## First-Class Certificates.

Charles L. Sutherland,  
Andrew R. Muir, }

Nicolas Gebbie.  
Daniel W. Ritchie.

\*Harold E. Whittingham.  
Malcolm A. MacDonald.

Thomas J. Mackie,  
James D. Walker, }

Equal.

\*Special Certificate for Histological Diagrams.

## Second-Class Certificates.

Allan B. Hamilton.	Andrew S. Findlay,	} Equal.
James T. Diek,	Robert R. Archibald, M.A.,	
John Stewart,	Robert H. Deans,	} Equal.
Gilbert I. Strachan.	Dorothy E. Lindsay,	
James M. Scott, M.A.,	Edward N. Thomson,	} Equal.
Agnes M. M'Michael,	Jeanie D. M'Whirter, M.A.,	
Donald C. Macdonald,	Florence E. Sexton.	
James G. Young.	John R. Haldane,	} Equal.
	Frank L. Robertson,	

## PRACTICAL PHYSIOLOGY.

PROFESSOR JOHN GRAY M'KENDRICK, M.D., LL.D., F.R.S.

*Summer Session, 1906.*

John Hunter Medal and First-Class Certificate.

Douglas Young.

## First-Class Certificates.

William R. Cooper.	John M. Morgan.	
William Macewen.	David C. Suttie,	} Equal.
William M'Adam, M.A.,	David Yellowlees,	
James L. Ure,	Morris W. Broudy,	

## Second-Class Certificates.

William Anderson,	William Niccol,	} Equal.
William Kerke,	William Howat, M.A.,	
James B. Galbraith,	Charles Duguid, M.A.,	

## ADVANCED PRACTICAL PHYSIOLOGY.

*Winter Session, 1906-7.*

PROFESSOR D. NOEL PATON, B.Sc., M.D.

John Hunter Medal and First-Class Certificate.

William M'Adam, M.A.

## First-Class Certificates.

James Hendry, M.A.	Donald Fisher.	Robert R. Archibald, M.A.
--------------------	----------------	---------------------------

## MATERIA MEDICA AND THERAPEUTICS.

PROFESSOR RALPH STOCKMAN, M.D.

First-Class Certificates (in order of merit).

Hyacinth B. W. Morgan (Medal).

John A. M. Cameron.

## Second-Class Certificates (in order of merit).

William Rutherford.	James B. Galbraith.
George Macleod, M.A.	Robert Gale.
David C. Suttie.	Kenneth C. G. Gray.
John Allan.	Robert B. F. McKail.
James K. Dunlop, M.A.	William Niccol.
Donald Fisher.	Albert W. Gregorson.
William M'Connell.	John W. M'Nee.
James Harper, M.A.	Robert D. Goldie.
Bentley M. Hunter.	William Howat, M.A.

## PRACTICAL PHARMACY.

PROFESSOR RALPH STOCKMAN, M.D.

*Summer Session, 1906.*

## First-Class Certificates.

Hyacinth B. W. Morgan (Medal). Thomas Marlin.

## Second-Class Certificates.

Alexander G. Gilchrist.	James B. Galbraith,	} Equal.
Andrew C. Anderson,	William Howat, M.A.,	
Charles Duguid, M.A.,	William M. M'Kie,	
James Dunlop, M.A.,	Campbell Macmillan,	
David C. Suttie.	James B. Whitfield.	

## BOTANY.

PROFESSOR F. O. BOWER, Sc.D., F.R.S.

*Summer Session, 1906.*

## SYSTEMATIC.

## First-Class Certificates.

James Dunlop, M.A. (Medal). James A. S. Burges.  
Thomas J. Mackie.

## Second-Class Certificates.

Robert H. Deans.	Malcolm Littlejohn.	} Equal.
Donald Patton.	Thomas S. Campbell,	
James C. Wilson.	Nicolas Gebbie,	

## PRACTICAL.

Medal and First-Class Certificate.

Colin Sinclair.

## Second-Class Certificates.

Donald Patton. Nicolas Gebbie. James C. Wilson.

## HERBARIUM PRIZE.

No Award.

## BOTANY FOR TEACHERS IN TRAINING.

Lecturer—WILLIAM H. LANG, D.Sc., M.B.

*Summer Session, 1906.*

## First-Class Certificates.

- |                             |          |                              |          |
|-----------------------------|----------|------------------------------|----------|
| 1. { Elizabeth R. M'Troy, } | } Equal. | 4. { Elizabeth S. Bruce, }   | } Equal. |
| { Donald Sutherland, }      |          | { Agnes F. Scott, }          |          |
| 3. Albert W. Gordon.        |          | 6. { Elizabeth E. Carlyle, } | } Equal. |
|                             |          | { Eliza B. Henderson, }      |          |

## Second-Class Certificates.

- |                            |          |                                |          |
|----------------------------|----------|--------------------------------|----------|
| 8. Helen Naismith.         |          | 15. { Jessie S. Hamilton, }    | } Equal. |
| 9. Margaret J. Rountledge. |          | { David Miller, }              |          |
| 10. { Janet M. Morton, }   | } Equal. | { Alexander Todd, }            |          |
| { Neil MacIntyre, }        |          |                                |          |
| 12. { Margaret Boyd, }     | } Equal. | 18. { Jeannie A. G. Dalzell, } | } Equal. |
| { Elizabeth S. W. Burns, } |          | { Isabella D. Ross, }          |          |
| { Janet S. Duncan, }       |          | { Helen A. Roy, }              |          |

## ZOOLOGY.

PROFESSOR JOHN GRAHAM KERR, M.A.

## SYSTEMATIC.

## First-Class Certificates (in order of merit).

- |                                    |          |                             |          |
|------------------------------------|----------|-----------------------------|----------|
| 1. { Charles Cameron, }            | } Equal. | 8. { John R. Grice, M.A., } | } Equal. |
| { William M'Murray, }              |          | { Malcolm Manson, }         |          |
| 3. Farquhar Matheson.              |          | 10. Charles Averill.        |          |
| 4. { Edward J. A. Stewart, M.A., } | } Equal. | { Thomas S. Barrie, }       | } Equal. |
| { Edward S. Russell, }             |          | { Fergus H. Young, }        |          |
| 6. John M. Lang.                   |          | { James F. Quigley, }       |          |
| 7. John Gibson.                    |          | 14. Angus K. Mackinven.     |          |
|                                    |          | 15. James E. Paterson.      |          |

## Second-Class Certificates (in order of merit).

- |                     |          |                       |          |
|---------------------|----------|-----------------------|----------|
| Kinloch Falconer,   | } Equal. | James D. Mackinnon,   | } Equal. |
| Archibald Gardner,  |          | Gordon A. Valentine,  |          |
| John R. Herbertson, |          | John Campbell.        |          |
| Barbara Macgregor,  |          | James M. Grier.       |          |
| Margaret Walker,    |          | William W. MacNaught. |          |
| James A. H. Telfer. |          | Thomas Walmsley.      |          |

## PRACTICAL.

## Medal and Special Prize.

William M'Murray.

## First-Class Certificates (in order of merit).

- |                    |                  |
|--------------------|------------------|
| John Drummond.     | Thomas Walmsley. |
| Charles H. Haddow. | Margaret Walker. |
| Charles Cameron,   | } Equal.         |
| Edward S. Russell, |                  |

## Second-Class Certificates (in alphabetical order).

- |                    |                     |
|--------------------|---------------------|
| Charles Averill.   | Andrew Neilson.     |
| Robert C. Corbett. | Lucy M. Ross.       |
| Malcolm Manson.    | James A. H. Telfer. |
| James Matheson.    |                     |

## ADVANCED CLASS.

*Summer Session, 1906.*

Second-Class Certificates.

1. James Hendry, M.A.

2. Jeanie D. McWhirter.

*Winter Session, 1906-7.*

First-Class Certificate.

Charles Cameron.

Second-Class Certificates.

James Hendry, M.A.

Andrew E. Struthers.

## PHYSICS.

Lecturer—GEORGE W. WALKER, M.A.

*Summer Session, 1906.*

Medal and First-Class Certificate.

Thomas J. Mackie.

First-Class Certificates (in order of merit).

Daniel W. Ritchie ( <i>proxime accessit</i> ).	James W. Anderson,	} Equal.
James Jack.	Robert H. Deans,	
James T. Brown.	William McMuray,	
Andrew Garvie.	Thomas Walmsley.	
Nicolas Gebbie.	Hugh L. Neil.	
	James D. Mackinnon.	

Second-Class Certificates (in order of merit).

Malcolm Sommerville.	Andrew S. Findlay.	
William Anderson,	George Cochrane.	} Equal.
Stuart S. Meighan,	Robert B. Austin.	
George J. Wilson.	John Mitchell.	
Andrew R. Muir.	Samuel Bryson.	
Hugh Forrest,	Malcolm MacLucas,	} Equal.
Fergus H. Young,	William Sneddon,	
Robert Drummond,	James A. J. Conway,	} Equal.
John M. Lang,	Douglas Wilson,	
Andrew B. MacLean,	Archibald McLeod.	
Donald C. Macdonald.	Henry Yellowlees.	
John Stewart.	Robert Findlay.	
William Taylor.	William Johnstone.	
Neil Morison.	William R. Taylor.	
John P. McVey.		

## CHEMISTRY.

PROFESSOR JOHN FERGUSON, M.A., LL.D., F.S.A.

Joseph Black Medal and George Roger Muirhead Prize.

Thomas S. Barrie.

First-Class Certificates.

Thomas S. Barrie.  
Henry H. Green.

Alexander B. Stich.

## Second-Class Certificates.

Archibald Gardner.  
George Jackson.  
William W. MacNaught.

John M. M'Neill.  
James E. Paterson.  
Alexander Stevens.

## ORGANIC CHEMISTRY.

Lecturer—T. S. PATTERSON, Ph.D.

First-Class Certificate.

Wilfred L. Henderson.

Second-Class Certificates.

William W. MacNaught.  
John M. M'Neill.

Harvey H. Montgomerie.

## ADVANCED.

*Summer Session, 1906.*

First-Class Certificate.

David P. M'Donald, M.A.

Second-Class Certificate.

Alexander S. Small.

## Faculty of Science.

## METALLURGICAL CHEMISTRY.

Lecturer—CHARLES E. FAWSITT, D.Sc., Ph.D.

*Summer Session, 1906.*

## CLASS A.

Certificates of Merit.

Henry C. Harris.  
John Jackson.

Richard D. Robertson, M.A.

## CLASS B.

Certificates of Merit.

Henry C. Harris.  
David P. M'Donald, M.A.

Frank L. Robertson.  
James G. Young.

*Winter Session, 1906-7.*

Certificates of Merit.

1. James Kirkland.  
2. George M. O. Barclay.

3. George Millar.



## PHYSICAL CHEMISTRY.

Lecturer—FREDERICK SODDY, M.A.

*Summer Session, 1906.*

Certificates with Distinction.

LECTURE COURSE.

John Jackson.

Robert Jack, M.A., B.Sc.

## GEOLOGY.

PROFESSOR JOHN W. GREGORY, D.Sc., F.R.S.

## PART I.

First-Class Certificates.

Murray Macgregor (Medal).

John F. Thomson.

Nathaniel Martin.

Daniel G. O'Brien.

Matthew M. Monie, M.A.

Second-Class Certificates.

Thomas B. Macaulay.

Robert R. Bow.

David Carson, M.A.

James Whyte.

Frank L. Robertson.

## PART II.

First-Class Certificate.

Frank W. Fairlie.

Second-Class Certificates.

Andrew Hutchison, M.A.

David P. M'Donald, M.A.

James C. Wilson.

## ASTRONOMY.

PROFESSOR LUDWIG BECKER, Ph.D.

Class Prize.

James Paul, M.A.,

Alexander D. Ross, M.A., } Equal.

## ENGINEERING.

PROFESSOR ARCHIBALD BARR, D.Sc., M.Inst. C.E.

George Harvey Prize.

Henry R. Climie, New Zealand.

Walker Prizes.

1. Henry R. Climie.

3. James Mirrey, Newton-Stewart.

2. James Barr, Kilmarnock.

Muir Bursaries.

1. David Thomson, Aberdeen.

2. John M. Strang, Bearsden.

## CLASS IV.

- |                     |                           |
|---------------------|---------------------------|
| 1. James Barr.      | 3. Hugh Jack, Uddingston. |
| 2. Henry R. Climie. |                           |

Next in Order.

Thomas B. Maxwell, Falkirk.	Frank S. Easton, Glasgow,	} Equal.
	Nathaniel Martin, Glasgow,	

## CLASS II.

- |                             |          |
|-----------------------------|----------|
| 1. Frank S. Easton.         |          |
| 2. { Nathaniel Martin,      | } Equal. |
| Charles A. Taylor, Paisley, |          |

Next in Order.

Alexander Macdonald, Glasgow.	Harold D. Wheeler, Norwich.
James G. Stewart, Dundee.	

## CLASS I.

- |                          |                                    |
|--------------------------|------------------------------------|
| 1. John M. Strang.       | 3. Joseph W. Sommerville, Glasgow. |
| 2. Robert Frew, Glasgow. |                                    |

Next in Order.

Thomas W. Chalmers, Glasgow.	Harry H. Vaughan, Glasgow.
------------------------------	----------------------------

## ENGINEERING DRAWING AND DESIGN—SENIOR CLASS.

- |                                 |          |
|---------------------------------|----------|
| 1. { Robert Boyle, Auchinleck,  | } Equal. |
| Frank S. Easton,                |          |
| 3. Robert M. Brown, Strathaven. |          |

Next in Order.

Hugh Jack.	Alexander Gordon, Glasgow.
Duncan M'Millan, Glasgow.	

## ENGINEERING DRAWING AND DESIGN—JUNIOR CLASS.

- |                           |                    |
|---------------------------|--------------------|
| 1. David Thomson.         | 3. John M. Strang. |
| 2. Joseph W. Sommerville. |                    |

Next in Order.

Robert Frew.	James G. Stewart.
Thomas W. Chalmers.	Harry H. Vaughan.

## ENGINEERING LABORATORY—SENIOR.

## A. MECHANICAL.

John L. Ewan, London,	} Equal.
Frank S. Easton,	

Next in Order.

Alexander MacLaren, Motherwell.	Andrew M. Wallace, Oxford.
Alexander S. Ritchie, Dunfermline.	

## B. ELECTRICAL.

Hugh Jack,	} Equal.
Thomas B. Maxwell,	

Next in Order.

James Barr.	James Mirrey.
Henry R. Climie.	William Pate, Carron.

## ENGINEERING LABORATORY—JUNIOR.

1. Peter D. MacFeat, Glasgow.
2. { Frank S. Clark, London, } Equal.
2. { James G. Stewart, }

Next in Order.

Daniel D. Baird, Glasgow.

Wilfrid R. Whitson, Glasgow.

## ELECTRICAL ENGINEERING.

Lecturer—JOHN S. NICHOLSON, B.Sc.

## CLASS I.

1. James Barr.
2. John M. Strang.
3. David Thomson.

Next in Order.

Cleovule Papageorge, Athens.

James W. Brown, Greenock.

## CLASS II.

1. Hugh Jack.
2. William Pate.

Next in Order.

Thomas B. Maxwell, } Equal.  
James Mirrey, }

James W. Brown.

## MINING ENGINEERING.

Lecturer—CHARLES LATHAM, M.Inst.C.E.

## CLASS I.

1. John B. Weir.
2. Arthur H. Wilson.
3. Charles D. Mottram.

## CLASS II.

1. Henry C. Harris.
2. William H. McMillan.
3. Kenneth L. Galloway.

## CLASS III.

1. Thomas N. Dewar.
2. George Millar.
3. George M. O. Barclay.

## NAVAL ARCHITECTURE, INCLUDING MARINE ENGINEERING.

PROFESSOR J. H. BILES, Mem. Counc. I.N.A., M.I.C.E., I.L.D.

Kirk Memorial Prize.

John Malcolm, } Equal.  
William Thomson, }

## SENIOR CLASS.

John Malcolm, } Equal.  
William Thomson, }

## JUNIOR CLASS.

Ernest Sutton.

## DRAWING CLASS.

Svend Henningsen.

## Faculty of Arts.

### HISTORY.

PROFESSOR DUDLEY J. MEDLEY, M.A.

#### Prizes.

- |                         |                           |
|-------------------------|---------------------------|
| 1. Henry Cook.          | 7. Margaret J. Routledge. |
| 2. Robert F. Rattray.   | 8. { William B. Bilsland. |
| 3. Jane Reid.           | { John O. Taylor.         |
| 4. John Boyd.           | 10. Ada M. W. Renwick.    |
| 5. Peter Allan.         | 11. Sydney R. Ward.       |
| 6. James R. Lyons, B.L. |                           |

#### Certificates.

- |                              |                         |
|------------------------------|-------------------------|
| 12. { Catherine N. Falconer. | 18. John D. Anderson.   |
| { Peter C. Millar.           | 19. Janet S. M'Culloch. |
| 14. Edward S. Matthew.       | 20. { John S. Armour.   |
| 15. William Kennedy.         | { William D. Taylor.    |
| 16. Georgina P. Davie.       | 22. Thomas Hyslop.      |
| 17. John Brown.              | 23. Andrew Forsyth.     |

### MATHEMATICS.

PROFESSOR WILLIAM JACK, M.A., LL.D., D.Sc.

#### ADVANCED HONOURS.

1. (Cunninghame Gold Medal) Robert Gibson.
2. Alexander S. Small.

Special Prize for Second Year Students—Margaret B. Moir.

#### First-Class Certificates.

- |                    |                                |
|--------------------|--------------------------------|
| David B. Meek.     | Harvey H. Montgomerie.         |
| Elizabeth P. Hogg. | James Paul, M.A.,              |
| John M. Strang.    | Janet G. M'Gown, } Second Year |
| Dorothy G. Reid.   | Walter Brown, } Students.      |

#### INTERMEDIATE HONOURS (DIVISION A).

1. { Caleb A. Stewart.
2. { Isabella B. Sutherland.
- { John S. Anderson.

{ Mr. Stewart obtains the Senior Muir Bursary in Mathematics.

#### First-Class Certificates.

- |                      |                    |
|----------------------|--------------------|
| 4. George C. Hutton. | 6. Robert C. Gray. |
| 5. John Falconer.    | 7. James Kirkland. |

#### INTERMEDIATE HONOURS (DIVISION B).

1. John M. McNeill.

#### First-Class Certificate.

2. Thomas W. Chalmers.

## GRADUATING CLASSES.

1. <sup>1</sup> William M. Smart (II. B.).
2. <sup>2</sup> William L. M'Kinlay (II. B.).
3. { Elizabeth D. Gibb (Q. M.).  
Robert H. Dick (II. A.).
4. { James Ritchie (II. A.).  
Isabel Robertson (Q. M.).
5. { Charles J. L. M'Donald (II. A.).  
James A. M'Cardel (II. A.).
6. Janet G. Reid (Q. M.).
9. { John A. Harper (II. B.).

<sup>1</sup> Mr. Smart obtains the Junior Muir Bursary in Mathematics.

<sup>2</sup> Mr. M'Kinlay is recommended for the remaining portion of the Junior Muir Bursary, vacated by Mr. Stewart.

## First-Class Certificates with Distinction.

Robert Thomson (II. B.).	Thomas Aitkenhead (II. A.).
William G. Burrell (II. B.).	Jeanie B. Trench (Q. M.). <sup>1</sup>
Jeanie Hamilton (Q. M.).	William S. Kerr (II. A.).
William J. Merry (II. A.).	George Jackson (II. B.).
Christina N. Low (Q. M.).	Archibald Baxter (II. A.).
John P. Weir (II. B.).	Sarah M'Gill (Q. M.).
Robert Campbell (II. A.).	Janet Ritchie (Q. M.).
John F. Hutton (II. B.).	Janet H. Baxter (Q. M.).

*Summer Session, 1906.*

Lecturers—DAVID K. PICKEN, M.A., and ROBERT J. T. BELL, M.A., B.Sc.

Prize—Herbert J. Paton.

## Certificates with Distinction.

Isabella B. Sutherland, }	Hector J. W. Hetherington.
James Porter, }	Equal.

## NATURAL PHILOSOPHY.

PROFESSOR ANDREW GRAY, M.A., LL.D., F.R.S.

## HIGHER CLASS. SECTION A.

## Prizes.

- Robert Ferguson, First Year Student.  
 John M'Whan, }  
 Margaret B. Moir, } Second Year Students.

## First-Class Certificates (in alphabetical order).

George Anderson.	John M'Whan.
Robert Ferguson.	Margaret B. Moir.
John Jackson.	James Paul, M.A.

## HIGHER CLASS. SECTION B.

## Prizes.

- James Barr, }  
 John Jackson, } First Year Students.  
 1. David B. Meek, }  
 2. John M'Whan, } Second Year Students.

## First-Class Certificates (in alphabetical order).

James Barr.	Margaret B. Moir.
Robert Gibson.	Cleovule Papageorge.
John Jackson.	Alexander S. Russell.
John M'Whan.	Alexander S. Small.
Janet G. M'Gown.	Robert Stewart.
John Malcolm.	William Thomson.
David B. Meek.	Ralph S. Weir, M.A.

## ORDINARY CLASS.

## Prizes.

1. Donald C. Smith (Cleland Gold Medal).
2. { Robert Bald.  
George Jackson.
3. { John M. M'Neill.  
Isabella B. Sutherland.
6. John S. Anderson.

## First-Class Certificates (in alphabetical order).

Thomas H. Black.	John F. Hutton.
Catherine N. Falconer.	Sergius Lapotnicoff.
John Falconer.	Murray Macgregor.
William V. Forrest.	Alexander S. MacWhirter.
Robert C. Gray.	Robert Rankin.
John A. Harper.	Caleb A. Stewart.
Thomas A. Heap.	Robert Stewart.
George C. Hutton.	James Wilson.

## PHYSICAL LABORATORY.

## ADVANCED COURSE.

## Prize and First-Class Certificate.

John Jackson.

## ORDINARY COURSE.

## Prize and First Class Certificate.

{ George Jackson.  
{ Sergius Lapotnicoff.

## First-Class Certificates. Whole Session.

Robert Bald.	Hans R. Moreh.
David Croll.	Robert Scott, M.A.

## First-Class Certificates. Half Session.

Robert Gibson.	Thomas N. Thomson.
John Jackson.	Walter J. T. White.
John M. M'Neill.	Joseph Wilson.
Thomas W. Rutherford.	

## SPECIAL GRADUATING CLASS OF LECTURES AND PRACTICAL WORK.

## Prizes.

Barbara F. Watson. Margaret M'Gill.  
William Sim obtained first place in one examination, but was unable to be present at the second.

## First-Class Certificates (in alphabetical order).

Jemima Barrie.	Lily Ross.
Patrick Brough.	William Sim.
John R. Brown.	Jane Simpson.
Margaret M. Cunningham	Ann M. Stewart.
May R. M'Bride.	Barbara F. Watson.
Margaret M'Gill.	

## PHYSICAL LABORATORY.

*Summer Session, 1906.*

## First-Class Certificates (in alphabetical order).

## ADVANCED COURSE.

George Anderson.	Margaret B. Moir.
Hugh Higgins.	Sebastian G. M. Ure.
John M'Whan.	James Williamson.
David B. Meek.	

## ORDINARY COURSE.

John S. Anderson.	Alexander S. Russell.
Jatindra K. D. Gupta.	Louis F. M. Savy.
Peter D. MacFeat.	Robert F. Stephen.
Nathaniel Martin.	

## ELECTRICITY, PURE AND APPLIED.

Lecturer—JAMES G. GRAY, B.Sc.

## First-Class Certificates.

Cleovule Papageorge (Prize).	Robert Rankin.	James W. Brown.
------------------------------	----------------	-----------------

## LOGIC AND METAPHYSICS.

PROFESSOR ROBERT LATTA, M.A., D.Phil.

## ORDINARY CLASS.

## Prizes.

- |                                    |                                     |
|------------------------------------|-------------------------------------|
| 1. Robert Gibson (Buchanan Prize). | 6. { George A. M. Dickson, } Equal. |
| 2. Bernard I. Macalpine.           | { Nancy F. Mackay. }                |
| 3. George D. Henderson.            | 8. Robert J. Cuthbert.              |
| 4. William M. Mathieson.           | 9. Annie I. Henderson.              |
| 5. John Robb.                      | 10. Angus Nicolson.                 |
|                                    | 11. Margaret L. S. Forrester.       |

## First-Class Certificates of Merit.

Ebenezer Broadhead.	Samuel W. Hutcheon.
Annie G. Brock.	Mary M. Inglis.
Elizabeth S. W. Burns.	Jeanie H. M'Neil.
Elizabeth E. Carlyle.	William Marshall.
Helen G. Cook.	Edward S. Matthew.
Alexander S. Fulton.	James Porter.
Elizabeth M. Gribben.	Grace H. Stark.
Hector J. W. Hetherington.	

## MORAL PHILOSOPHY.

PROFESSOR HENRY JONES, LL.D., D.Litt., F.B.A.

## HONOURS CLASS.

1. Leonard J. Russell, M.A. (Edward Caird Medal and Mrs. John Caird's Prize of Three Guineas).
2. Hugh A. Reyburn (Mrs. John Caird's Prize of Two Guineas).

Mrs. John Caird's Prize of Five Guineas for Summer Work.

1. Leonard J. Russell, M.A.
2. Alexander T. R. Yuille.

## ORDINARY CLASS.

Prizes and First-Class Certificates of Merit for General Eminence in the Essays, Exercises, and Examinations of the Class.

- |                                       |                         |
|---------------------------------------|-------------------------|
| 1. Herbert J. Paton (Buchanan Prize). | 6. William Paterson.    |
| 2. William M'Nicol.                   | 7. William G. Johnston. |
| 3. Wilfrid L. Marsh.                  | 8. Jeanie C. Anderson.  |
| 4. James Rossie Brown.                | 9. Mary L. Hutton.      |
| 5. Charles H. Weaver.                 |                         |

## First-Class Certificates (in order of merit).

Arthur H. Dunnett.	Fergus H. Young.
Dugald M'Arthur.	Robert J. Thomson.
Adam B. Mitchell.	Edith M. Whitson.
John D. Anderson.	William Flint.
John Brown.	Elizabeth S. Bruce.
Thomas W. Armour.	

The Prize of Five Guineas given by Mrs. John Caird for Excellence in the Essays was awarded to

1. Herbert J. Paton.
2. James Rossie Brown.

## POLITICAL PHILOSOPHY.

Lecturer—ROBERT A. DUFF, M.A., D.Phil.

## First-Class Certificates (in alphabetical order).

Archibald A. Campbell, M.A.	Leonard J. Russell, M.A.
James Gunnison.	Donald Stalker.
Hugh A. Reyburn.	

## POLITICAL ECONOMY.

PROFESSOR WILLIAM SMART, M.A., LL.D., D.Phil.

THE ALEXANDER SMART MEMORIAL PRIZE of £10 in Books.

John S. Boyd.

## CLASS PRIZES.

- |                      |                          |
|----------------------|--------------------------|
| 1. John S. Boyd.     | 4. Charles H. Weaver.    |
| 2. Hugh A. Reyburn.  | 5. Charles E. Duff, M.A. |
| 3. Thomas W. Armour. |                          |

*Pro.eine accesserunt.*

William Y. Colquhoun.	John C. Collingwood.
Alexander S. Russell.	James W. Findlay.
Donald Leggat.	



## EDUCATION.

Lecturer—JOHN CLARK, M.A.

## Prizes.

- |   |        |   |        |
|---|--------|---|--------|
| 1. { Margaret E. Buchanan,<br>Ellen R. Walker,<br>Sophie Yates, } | Equal. | 6. { Jas. M. Barclay, M.A.,<br>Elizabeth G. Morison,<br>M.A., } | Equal. |
| 4. Margaret C. Mitchell.  |        | 8. { Margaret Dunne,<br>Janey A. Keddie, M.A., }                | Equal. |
| 5. Fanny S. Thomson.  |        | 10. { Annie M. Macphail, M.A.,<br>Margaret D. Smith, }          | Equal. |

## First-Class Certificates of Merit.

- |  |                           |
|--|---------------------------|
| 1. Annie K. Neill.                                 | 7. Lizzie Marshall.       |
| 2. George D. C. Stokes, M.A., B.Sc.                | 8. Mary D. P. Anderson.   |
| 3. { James Carmichael, M.A.,<br>Janet F. Kellie, } | 9. Angus Nicolson.        |
| 5. Elizabeth S. Bruce.                             | 10. Christian Ewen, M.A.  |
| 6. Margaret G. Russell, M.A.                       | 11. Elizabeth R. McIlroy. |

First-Class Certificates of Merit were also awarded to Clarence J. Vincent, M.A., and Elizabeth E. Carlyle, who were unable to be present at all the examinations.

## Essay Prize.

George D. C. Stokes, M.A., B.Sc.

*Proxime accesserunt* (in alphabetical order).

William P. Black.	Fanny S. Thomson.
Aaron Cantor.	Clarence J. Vincent, M.A.
James Carmichael, M.A.	

## HUMANITY.

PROFESSOR JOHN S. PHILLIMORE, M.A.

## HONOURS CLASS.

Ramsay Medallist—Bryce K. N. Wyllie (Dumfries Academy).

## Muirhead Prizemen.

1. Bryce K. N. Wyllie (Dumfries Academy).
2. John Robb (High School, Coatbridge).
3. Wallace M. Conley (Campbeltown Grammar School).

## Certificates of Distinction.

Hugh F. Martin (High School, Glasgow).  
Helen B. S. Lennox.

## SENIOR CLASS.

## General Order of Merit.

1. Cowan Medallist—Ernest Evans (Staffordshire Potteries P.T. Inst., Hanley).

## Prizewinners.

2. James B. Hutton (Dollar Institution).
3. Isabel Robertson (Hillhead High School).
4. George A. Johnston (High School, Glasgow).
5. Andrew D. Gibb (Trinity College, Glenalmond).
6. Tom D. Miller (High School, Glasgow).

## Special Prizes—For Prose.

1. Peter Revie (Campbeltown Grammar School).
2. Annie M. Conway (Our Lady and S. Francis H.G. School).
3. Jeannie Sutherland (Riebeck College, Uitenhage, Cape Colony).

## For Translation Papers.

Ernest Evans (Staffordshire Potteries P.T. Institute, Hanley).  
 James B. Hutton, 9 o'clock div. (Dollar Institution).  
 Benjamin McKenna, 8 o'clock div. (Fairfield H.G. School).  
 Isabel Robertson, Q.M.C. (Hillhead High School).  
 Annie M. Conway, Q.M.C. (Our Lady and S. Francis H.G. School).  
 Jean M. G. Alexander, Q.M.C. (Irvine Royal Academy).

## For Oral Work (Prizes assigned by the votes of the Class).

Ernest Evans, 9 a.m. (Staffordshire Potteries P.T. Institute, Hanley).  
 James S. Weir, 9 a.m. (Beith Academy).  
 James A. McCord, 8 a.m. (Glasgow P.T. Institute).  
 William D. M. Williamson, 8 a.m. (George Watson's College, Edinburgh).

## Certificates of Distinction (in alphabetical order).

John Agnew (Campbeltown Grammar School).  
 Thomas Aitkenhead (Clydebank H.G. School).  
 John C. Andrew (Carrick Academy, Maybole).  
 William S. Buchan (Spier's School, Beith).  
 Annie M. Conway (Our Lady and S. Francis H.G. School).  
 William Kerr (High School, Stirling).  
 James Manson (High School, Glasgow).  
 John Paterson, 9 a.m. (Rothesay Academy).  
 Peter Revie (Campbeltown Grammar School).  
 James S. Weir (Beith Academy).  
 John P. Weir (Beith Academy).

## Latin Blackstone Examination Cowan Gold Medal.

Bryce K. N. Wyllie (Dumfries Academy).

*Summer Session, 1906.*

Lecturer—ROBERT G. NISBET, M.A.

## Prizes.

1. William B. Henderson.
2. { Jackson S. Chedburn, }  
 { John Smith. } Equal.

## GREEK.

PROFESSOR GILBERT A. DAVIES, M.A.

## HONOURS CLASS (first year only).

## First-Class Certificates (in order of merit).

1. Bryce K. N. Wyllie (Scott-Macfarlan Gold Medal).
2. Hugh F. Martin (First Prize).
3. Bernard I. Macalpine (Second Prize).
4. John Robb.
5. Helen B. S. Lennox.

## Prizes for Prose.

1. Hugh F. Martin.
2. Bryce K. N. Wyllie.

Prize for Translation—Bryce K. N. Wyllie.

## VACATION EXERCISES.

Prize for Prose—Alexander D. Hodge.

## SENIOR CLASS.

First-Class Certificates (in order of merit).

- |  |                       |
|--|-----------------------|
| 1. James B. Hutton (Jeffrey Gold Medal). | 5. William S. Buchan. |
| 2. Andrew D. Gibb (First Prize).         | 6. Tom D. Miller.     |
| 3. Lionel Levine (Second Prize).         | 7. James Baillie.     |
| 4. George A. Johnston (Third Prize).     |                       |

Prizes for Translation.

- |                    |                     |
|--------------------|---------------------|
| 1. Andrew D. Gibb. | 2. James B. Hutton. |
|--------------------|---------------------|

Prizes for Prose.

- |                     |                   |                    |
|---------------------|-------------------|--------------------|
| 1. James B. Hutton. | 2. Lionel Levine. | 3. Andrew D. Gibb. |
|---------------------|-------------------|--------------------|

Prizes for Oral Work (adjudged by the votes of the class).

- |                  |                       |                     |
|------------------|-----------------------|---------------------|
| 1. John P. Weir. | 2. William S. Buchan. | 3. James B. Hutton. |
|------------------|-----------------------|---------------------|

Blackstone Examination.

Cowan Gold Medal—Bryce K. N. Wyllie.

## ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR WILLIAM MACNEILE DIXON, M.A., Litt.D., LL.B.

## Prizemen.

- |                                     |
|-------------------------------------|
| 1. Robert Gibson, Buchanan Prize.   |
| 2. George D. Henderson.             |
| 3. { William M. Blackwood, } Equal. |
| { Andrew Cunningham, }              |
| 4. { William Macintyre, } Equal     |
| { Herbert J. Paton, }               |
| 5. John Smith.                      |
| 6. Alexander D. Hodge.              |
| 7. James Watson.                    |
| 8. John C. Kinnear.                 |
| 9. James H. Benzie.                 |
| 10. Edward S. Russell.              |
| 11. Sydney R. Ward.                 |
| Robert Wood (special prize).        |

First-Class Certificates.

- |               |                    |
|---------------|--------------------|
| Peter Allan.  | Aaron Cantor.      |
| John S. Boyd. | Alexander Gilmour. |

## FRENCH LANGUAGE AND LITERATURE.

Lecturer—CHARLES MARTIN, M.A., O.A.

## HONOURS CLASS.

Prizes and First-Class Certificates.

First Prize.

Prize offered by the Minister of Public Instruction in France.

Andrew Clark.

- |               |                        |        |
|---------------|------------------------|--------|
| Second Prize— | { Mary F. Armour, }    | Equal. |
|               | { Helen A. Mitchell, } |        |

## First-Class Certificates.

Marie F. Krasser. Grace Oliphant, M.A.  
Daisy Macdonald.

## ORDINARY CLASS.

## Prizes and First-Class Certificates.

1. David L. Grant. 2. John C. M'Fadyen.  
3. William G. Walker.

## First-Class Certificates.

Thomas MacLaren. John G. Ritchie.

## GERMAN LANGUAGE AND LITERATURE.

Lecturer—G. P. THISTLETHWAITE, B.A., Ph.D.

## ORDINARY CLASS.

## Prizes.

1. Agnes F. Scott.  
2. { Elizabeth S. W. Burns, }  
   { David D. Anderson, } Equal.  
   { Benjamin M'Kenna, }

## First-Class Certificates.

Mary M. Inglis. David L. Grant.

## WOMEN'S DEPARTMENT.

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Faculty of Medicine.

---

## SURGERY.

Lecturer—JAMES HOGARTH PRINGLE, M.B., F.R.C.S.

## First-Class Certificates.

Jessie D. Rankin, M.A., B.Sc. (Medal). Margaret G. Forrest.

## Second-Class Certificates.

Martha M. Buchan. Jessie D. Rankin.  
Ella S. Hill, M.A. Jeanie H. Stewart.

## PRACTICE OF MEDICINE.

Lecturer—WALTER K. HUNTER, M.D., D.Sc.

## Second-Class Certificates.

Jessie C. Russell. Margaret B. S. Darroch. Janet A. Macvea.

## HYGIENE

PROFESSOR EDWIN C. LAMSON, M.D., and JOHN L. DUTNEY, M.D.

First-Class Certificate—Blair Boer Medal.

Second-Class Certificate—Margaret I. Burrows.

## INSANITY

See under Med. Department.

## PATHOLOGY

Summer Session, 1896.

Lectures—A. MARTIN LAMSON, M.D.

First-Class Certificate.

Wm. C. ROBERTSON, M.D. Prize. MARTIN I. LAMSON.

## PATHOLOGY

Lectures—CHARLES VORHIES, M.D.

First-Class Certificate.

MARGARET I. BURROWS Medal. JESSIE L. RUSSELL.

## PRACTICAL PATHOLOGY

Summer Session, 1896.

Lectures—CHARLES VORHIES, M.D.

First-Class Certificate.

JESSIE L. RUSSELL Medal. MARGARET I. BURROWS.

MARGARET I. BURROWS.

Second-Class Certificate.

JESSIE D. RANKIN. BLAIR BOER.

## MEDICAL JURISPRUDENCE AND PUBLIC HEALTH

Summer Session, 1896.

PROFESSOR JOHN GILCHRIST, M.D., D.D.H. (Canada), F.R.S.E.

First-Class Certificate—Blair Boer Medal.

Second-Class Certificate.

JESSIE D. RANKIN. JAMES.

JESSIE L. RUSSELL.

## ANATOMY.

Lecturer—THOMAS H. BRYCE, M.A., M.D.

## SENIOR CLASS.

First-Class Certificate—Margaret E. Robertson (Medal).

Second-Class Certificate—Mary C. Mitchell.

## JUNIOR CLASS.

Second-Class Certificates.

Agnes M. M'Michael.

Agnes B. Auchencloss.

Louisa E. Dodge.

Margaret Walker.

Mary Alexander, M.A.

## EMBRYOLOGY AND PRACTICAL ANATOMY.

*Summer Session, 1906.*

Lecturer—THOMAS H. BRYCE, M.A., M.D.

Second-Class Certificate.

Mary C. Mitchell.

## PHYSIOLOGY.

(See under Men's Department.)

## PRACTICAL PHYSIOLOGY.

*Summer Session, 1906.*PROFESSOR JOHN G. M'KENDRICK, M.D., LL.D., F.R.S., and  
WALTER COLQUHOUN, M.A., M.B.

First-Class Certificates.

Mary C. Mitchell (Medal).

Ethelwyn M. Walters.

## MATERIA MEDICA AND THERAPEUTICS.

Lecturer—WILLIAM MACLENNAN, M.B.

First-Class Certificates.

Margaret E. Robertson (Medal).

Mary C. Mitchell,  
Ethelwyn M. Walters, } Equal.

## PRACTICAL PHARMACY.

*Summer Session, 1906.*

Lecturer—WILLIAM MACLENNAN, M.B.

First-Class Certificates.

Agnes M. M'Michael (Medal).

Louisa E. Dodge.

## BOTANY.

*Summer Session, 1906.*

Lecturer—D. T. GWYNNE VAUGHAN, M.A.

## SYSTEMATIC.

First-Class Certificates.

Barbara G. Rutherford (Medal).

Florence E. Sexton (with merit).

## PRACTICAL.

Second-Class Certificates.

Margaret E. Buchanan.

Alexandrena Carswell.

BOTANY FOR TEACHERS IN TRAINING.

(See under Men's Department.)

## ZOOLOGY.

*Summer Session, 1906.*

PROFESSOR JOHN GRAHAM KERR, M.A.

## SYSTEMATIC.

First-Class Certificates.

1. Isabel Inglis.

2. Florence E. Sexton.

Second-Class Certificates.

1. Barbara G. Rutherford.

2. Barbara Sutherland.

## PRACTICAL.

Second-Class Certificates.

1. Florence E. Sexton.

2. Katherine S. Macphail.

*Winter Session, 1906-7.*

(See under Men's Department.)

## CHEMISTRY.

Lecturer—HERBERT W. BOLAM, B.Sc., Ph.D.

## SYSTEMATIC.

Second-Class Certificates.

Barbara G. Rutherford.

Lucy M. Ross.

Mary Alexander, M.A.

Agnes B. Auchencloss.

Isabel Inglis.

## PRACTICAL.

First-Class Certificate.

Barbara G. Rutherford.

Second-Class Certificates.

Mary Alexander, M.A.,	} Equal.
Agnes B. Auchencloss,	
Barbara Macgregor,	
Barbara Sutherland,	

## Faculty of Science.

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ADVANCED ZOOLOGY.  
(See under Men's Department.)

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## Faculty of Arts.

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HISTORY.  
(See under Men's Department.)

CONSTITUTIONAL LAW AND HISTORY.  
(See under Men's Department.)

MATHEMATICS.  
(See under Men's Department.)

NATURAL PHILOSOPHY.  
(See under Men's Department.)

PHYSICAL LABORATORY.  
(See under Men's Department.)

LOGIC AND METAPHYSICS (AT THE UNIVERSITY).  
(See under Men's Department.)

LOGIC AND METAPHYSICS (AT QUEEN MARGARET COLLEGE).

Lecturer—ARCHIBALD A. BOWMAN, M.A.

First-Class Certificates.

Annie K. Neill (Prize).

Margaret D. Smith.                      Jeanie C. Anderson.

Elizabeth R. M'Iroy.

MORAL PHILOSOPHY (AT THE UNIVERSITY).  
(See under Men's Department.)



## EDUCATION.

(See under Men's Department.)

## LATIN.

(See under Men's Department.)

## GREEK.

(See under Men's Department.)

## ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR WILLIAM MACNEILE DIXON, M.A., Litt.D., LL.B., AND  
JOHN L. MORISON, M.A.

- |   |                         |
|---|-------------------------|
| 1. Muriel Nelson (Nichol Memorial Prize). |                         |
| 2. Margaret S. McLeod.                    | 5. Mary L. Hutton.      |
| 3. { Mary Hunter, } Equal.                | 6. Fanny S. Thomson.    |
| { Janet Dodd. }                           | 7. Janet C. MacNeilage. |

## Honourable Mention.

Janet A. Livingston.  
Ada M. W. Renwick.

Kate M. Macintyre.

## Special Essay Prize.

Marie C. A. Templeton.

For a piece of Folk-Lore or Legend.

Kate M. Macintyre.

## FRENCH LANGUAGE AND LITERATURE.

Lecturers—CHARLES MARTIN, M.A., O.A., and LÉON PITOY, L. ès L.Phil.

## HONOURS CLASS.

(See under Men's Department.)

## ORDINARY CLASS.

## Prizes.

- |                             |                                 |
|-----------------------------|---------------------------------|
| 1. { Agnes Morton, } Equal. | 4. { Mary S. Anderson, } Equal. |
| { Josephine M. Small, }     | { Annie M. Conway, }            |
| 2. Margaret E. Watson.      | { Alice Green, }                |
| 3. Alice M. Nelson.         |                                 |

## First-Class Certificates (in alphabetical order).

Elizabeth S. Barr.  
Isabella F. Dove.  
Janet B. Gallie.  
Dora S. Henderson.  
Joan D. Mackenzie.  
Margaret E. Martin.  
Annie K. Neill.

Janet M. Rae.  
Margaret D. Smith.  
Nettie H. Stein.  
Jean Stewart.  
Mary Thomson.  
Edith M. Whitson.

## GERMAN LANGUAGE AND LITERATURE.

Lecturer—G. P. THISTLETHWAITE, M.A., Ph.D.

## HONOURS CLASS.

## Prizes.

1. Mary F. Armour.
2. { Isabella Davidson, }  
       { Marie F. Krasser, } Equal.  
       { Helen A. Mitchell, }

## First-Class Certificates.

Grace Chapman, M.A.

Isabella M. Ross.

Daisy Macdonald.

Jean G. Stephen.

## ORDINARY CLASS (Queen Margaret College).

## Prizes.

1. Nettie H. Stein.
2. { Margaret E. Buchanan, }  
       { Josephine M. Small, } Equal.  
       { Susan B. Vallance, }

## First-Class Certificates.

Jean M. G. Alexander.

Agnes Morton.

Margaret E. Martin.

Alice M. Nelson.

## ORDINARY CLASS (University).

(See under Men's Department.)

### XIII.—EXAMINATION QUESTIONS.

## I. PRELIMINARY EXAMINATION IN ARTS AND SCIENCE.

March, 1907.

### ENGLISH.

#### FIRST PAPER—Two Hours.

(FIVE, and not more than FIVE, questions are to be answered. Questions 1, 2, and 6 must be answered by all.)

1. Write an essay on *one* of the following subjects :

- (a) Physical Culture.
- (b) Novels of Adventure.
- (c) Fairy Lore.

2. Paraphrase, explaining carefully the meaning of the metaphors employed :

Say not the struggle nought availeth,  
The labour and the wounds are vain,  
The enemy faints not, nor faileth,  
And as things have been they remain.

If hopes were dupes, fears may be liars ;  
It may be, in yon smoke concealed,  
Your comrades chase e'en now the fliers,  
And, but for you, possess the field.

For while the tired waves, vainly breaking,  
Seem here no painful inch to gain,  
Far back, through creeks and inlets making,  
Comes silent, flooding in, the main.

And not by eastern windows only,  
When daylight comes, comes in the light,  
In front, the sun climbs slow, how slowly,  
But westward, look, the land is bright.

3. Give the derivation of *six* of the following, adding when necessary a note on the history of the form or meaning : vixen, nightingale, lord, mice, chief, gospel, wiseacre, fee, church, silk, furlong, coward, husband, cemetery, thimble, spinster.

4. Explain the following terms : hybrid, solecism, mixed metaphor, apostrophe, euphemism, barbarism, anapaestic, assonance.

5. Comment on the following :

- (a) Saddle *me* the ass.
- (b) *Those* kind of persons.
- (c) John Brown *his* book.
- (d) The heathen *Chinee*.
- (e) So great riches *is* come to nought.
- (f) Our *mutual* friend.
- (g) If the salt has lost his savour.

6. Give a general analysis of the following passage, and parse the words in italics :

*Here* leaps ashore the full Sou'west  
*All* heavy-winged with brine,  
 Here lies above the folded crest  
 The Channel's leaden *line* ;  
 And here the sea-fogs lap and cling,  
 And here, *each* warning *each*,  
 The street-bells and the ship-bells ring  
 Along the hidden beach.  
 We have no waters to delight  
 Our broad and brookless vales—  
*Only* the dewpond on the height,  
 Unfed, that never fails,  
*Whereby* no tattered herbage tells  
*Which way* the season flies—  
 Only our close-bit thyme that smells  
 Like dawn in Paradise.

## SECOND PAPER—Two Hours.

(EIGHT, and not more than EIGHT, questions are to be answered. Of these, THREE must be taken from Section A (and of the THREE, 6 must be one), THREE from Section B, and TWO from Section C.)

### A.

1. Give a short account of any *three* of the following: Chaucer's *Knight's Tale*, *Morte D'Arthur*, *Tamburlaine*, *Euphues*, *Comus*, *The Hind and The Panther*, *The Tatler*, *The Vicar of Wakefield*, *Marmion*, *Childe Harold's Pilgrimage*, *The Mill on the Floss*, *In Memoriam*.

2. Show how Shakespeare unites various plots in *A Midsummer-Night's Dream*, and discuss the dramatic effect of the combination.

Or,

Illustrate Shakespeare's humour from *A Midsummer-Night's Dream*.

3. Illustrate from the selections in Books II. and IV. of the *Golden Treasury* the poetic genius and art of *one* of the following: Milton, Wordsworth, Keats.

Or,

Discuss, with illustrations from the *Golden Treasury*, the importance of Herrick and Shelley as lyric poets in their respective periods.

4. What do you consider the main characteristics of Jane Austen's method and style as they appear in *Emma*?

5. Explain and comment on Carlyle's conception of a "Hero." Discuss his application of the term to Dante or Dr. Johnson.

6. Annotate the following passages, with reference to the context :

(a) "Well, we will have such a prologue ; and it shall be written in eight and six."

(b) "So, with two seeming bodies, but one heart :  
Two of the first, like coats in heraldry,  
Due but to one, and crowned with one crest."

(c) "Yet it creates, transcending these,  
Far other worlds, and other seas ;  
Annihilating all that's made  
To a green thought in a green shade."

(d) "The pansy at my feet  
Doth the same tale repeat ;  
Whither is fled the visionary gleam ?  
Where is it now, the glory and the dream ?"

(e) "O lift me as a wave, a leaf, a cloud !  
I fall upon the thorns of life ! I bleed !  
A heavy weight of hours has chain'd and bow'd  
One too like thee—tameless, and swift, and proud."

(f) "Here are no fabulous woes or joys ; no hollow fantastic sentimentalities ; no wire-drawn refinings either in thought or feeling : the passion that is traced before us has glowed in a living heart."

## B.

(In this section candidates must take the questions of only ONE period.)

### FIRST PERIOD, 55 B.C. TO 1603 A.D.

1. Write brief notes on *four* of the following : Athelstan, Dunstan, the Bruces in Ireland, English Kings on Crusade, the Black Death, John of Gaunt, Warwick the Kingmaker, Thomas Cromwell, James V. of Scotland.

2. Write an account of any *one* of the following : Edward III.'s wars in France, Thomas Wolsey, Queen Elizabeth's favourites.

3. Write a very short essay on *one* of the following : The Growth of Parliament ; The English Conquest of Wales ; Mary, Queen of Scots.

### SECOND PERIOD, 1603 TO 1707 A.D.

1. Write brief notes on *four* of the following : The Impeachment of Bacon, The Petition of Right, Lord Falkland, Marston Moor and Naseby, The Cabal. The *Habeas Corpus* Act, Viscount Dundee, James II. in Ireland, The Union of the Parliaments.

2. Write an account of *one* of the following : Lord Strafford, Cromwell's campaigns in Scotland and Ireland, The career of Shaftesbury.

3. Write a very short essay on *one* of the following: Naval wars in the seventeenth century, The Protectorate, William III.'s foreign policy.

### THIRD PERIOD, 1707 TO 1832 A.D.

1. Write brief notes on *four* of the following: The Treaty of Utrecht, Carteret, English and French in India, Lord Bute, The Stamp Act, The two Administrations of Rockingham, The Convention of Cintra, The career of Canning.

2. Write an account of *one* of the following: The home and foreign policy of Walpole, The Jacobites, William Pitt (the Younger).

3. Write a very short essay on *one* of the following: The aims and influence of Lord Chatham, The Industrial Revolution in the later eighteenth century, The career of Wellington.

### C.

1. Give an account of the Dominion of Canada, describing more particularly its lake and river system and its chief towns.

2. Draw an outline of the N. and N.W. coasts of Africa from Alexandria to Cape Verde, filling in the chief towns, capes, and gulfs.

3. Give some account of the mines (other than coal-mines) in the United Kingdom, and estimate their influence on the localities in which they are situated.

4. Write brief notes on: Oyster Bay, Kiel, Breslau, Marienbad, Pietermaritzburg, The Curragh, Baku, Seoul, Geelong.

## LOWER LATIN—THREE HOURS.

(All Candidates must satisfy the Examiners in Composition and Translation.)

### I. TRANSLATION.

1. Translate:

*A single combat.*

Diu cunctantem Crispinum *perpulere* turmales,<sup>1</sup> ne inipune insultare Campanum *patere*tur; itaque tantum moratus, dum imperatores consulere, permitterentne sibi extra ordinem in provocantem hostem pugnare, permissu eorum arma cepit equumque *conscendit* et Badium nomine compellans ad pugnam evocavit. Nulla mora a Campano facta est; infestis equis concurrerunt. Crispinus supra scutum sinistrum umerum Badio hasta transiit superque delapsus cum vulnere ex equo desiluit, ut *perles* iacentem conficeret. Badius, priusquam *opprimeretur*, parma atque equo relicto ad suos aufugit; Crispinus equum armaque capta et cruentam cuspidem insignis spoliis ostentans cum magna laude et gratulatione militum ad consules est deductus laudatusque ibi magnifice et donis donatus.

2. Parse fully the words printed in italics in the passage above.

<sup>1</sup> Turmales, the men of his troop.

## II. FOR LATIN PROSE COMPOSITION.

When Alexander came with his army unto the gates of Thebes, he was willing to give them of the city occasion to repent them, and therefore only demanded Phoenix and Prothyas, authors of the rebellion. Furthermore he proclaimed pardon and safety unto all them that would yield unto him. The Thebans, on the other side, demanded of him Philotas and Antipater, two of his chiefest servants, and made the crier proclaim in the city that all such as would defend the liberty of Greece should join with them. Then did Alexander leave the Macedonians at liberty to make war with all cruelty. And the Thebans also fought with greater courage and desire than they were able, inasmuch as their enemies were many against one.

## III. GRAMMAR.

1. Give (a) genitive singular of *fémur*, *quercus*, *remex*, *mas*; (b) dative plural of *moenia*, *mus*, *grando*, *aedes*; (c) ablative singular of *sinus*, *frigus*, *nix*, *septentrio*.

2. Compare *parrus*, *audacter*, *nobilis*, *diu*, and give the English for *uter*, *quisque*, *quisquis*, *alter*.

3. Give (a) the 2nd sing. pres. subj. act. of *eo*, *cojo*, *reddo*, *volo*; (b) the supine of *aufero*, *sino*, *condo*, *pario*; (c) the 2nd plur. pres. imperative pass. of *caedo*, *rapio*, *purgo*, *moueo*; (d) the principal parts of *serpo*, *surripio*, *reueo*, *vivo*.

4. Give the Latin for: some went one way, others another; he concealed the matter from his father; Julia married Pompeius; Fabius was made dictator; you do not believe this, do you?

5. Distinguish between *vélis* and *vélis*; *sólis* and *sólis*; *cārō* and *cārō*.

## IV. SENTENCES.

1. They surrendered in order that they might not be slain.

2. He promised to return to Rome as soon as he could.

3. Do not attempt to persuade me to betray my country.

4. The citizens defended themselves so bravely that the enemy failed to take the town.

5. He said he could not forgive so great a crime.

## HIGHER LATIN.

## FIRST PAPER—Two Hours.

## I.

1. Translate:

Inclinatis omnium ad pacem animis, Cn. Lentulus consul, cui classis provincia erat, senatus consulto intercessit. Tum M' Acilius et Q. Minucius tribuni plebis ad populum tulerunt, vellent iuberentne senatum decernere ut cum Carthaginiensibus pax fieret; et quem eam pacem dare quemque ex Africa deportare exercitum iuberent. De

pace "uti rogas" omnes tribus iusserunt; pacem dare P. Scipionem, eundem exercitum deportare. Ex hac rogatione senatus decrevit ut P. Scipio ex decem legatorum sententia pacem cum populo Carthaginensi quibus legibus ei videretur faceret. Gratias deinde patribus egere Carthaginenses, et petierunt ut sibi in urbem introire et colloqui cum suis civibus liceret, qui capti in publica custodia essent; esse in iis partim propinquos amicosque suos, nobiles homines, partim ad quos mandata a propinquis haberent. Quibus conventis cum rursus peterent ut sibi quos vellent ex iis redimendi potestas fieret, iussi nomina edere.

Ita dimissi ab Roma Carthaginenses cum in Africam venissent ad Scipionem, quibus ante dictum est legibus pacem fecerunt.

2. Translate :

*Alaric, in Italy, refuses to retreat.*

Non ita di Getici faxint manesque parentum  
Ut mea converso relegam vestigia cursu !  
Hanc ego vel victor regno vel morte tenebo  
Victus humum. Per tot populos urbesque cucurri,  
Fregi Alpes, galeisque Padum victricibus hausi.  
Quid restat nisi Roma mihi? Gens robore nostra  
Tum quoque pollebat, nullis cum fideret armis.  
At nunc Illyrici postquam mihi tradita iura,  
Meque suum fecere ducem, tot tela, tot enses,  
Tot galeas multo Thracum sudore paravi.  
Hortantes his adde deos. Non somnia nobis  
Nec volneres, sed clara palam vox edita luco :  
"Rumpe omnes, Alarice, moras, hoc impiger anno  
Alpibus Italiae ruptis penetrabis ad urbem."  
Huc iter usque datur, quis iam post talia signis  
Ambigat aut caelo dubitet parere vocanti?

II. SENTENCES.

1. He said that if he did not defeat the enemy he would never return to Rome.
2. Though he was found guilty of extortion, there is no doubt that he was really innocent.
3. The consul advised his colleague not to join battle till the enemy began to cross the river.
4. He was so far from repenting that he refused to leave the city.
5. I hope you will come and see me when you are in town.

SECOND PAPER—TWO HOURS.

*(All Candidates must satisfy the Examiners in Prose Composition.)*

I.

Translate into Latin Prose :

And so he with certain chosen men assaulted the enemies on one side; and they though stricken upon the faces, yet did they not give back, but stoutly resisted him : and so joining the battle, the dust was



so thick that none could see one another, nor any hear what was said for the cries and noise; so that now no man could discern his friends from his foes. The Jews persisted still in the battle, not for that they trusted to their force or thereby prevailed, but because they were desperate. The Romans on the other part took courage, and fought stoutly for shame, and for that Caesar himself was in danger amongst them. So that I think that had not the Jews retired themselves into the city, the fury of the Romans had then consumed the whole multitude.

## II. GRAMMAR, ETC.

### 1. Translate with a note on the syntax:

- (a) *Regnata petam Laconi rura Phalautho.*
- (b) *At tu dictis, Albane, maneres.*
- (c) *Si fractus illabatur orbis, impavidum ferient ruinae.*
- (d) *Omne cum Proteus pecus egit altos visere montes.*

### 2. Write and translate short sentences to illustrate the constructions of: *credo, muto, ignosco.*

### 3. Scan:

- (a) *Linquenda tellus et domus et placens.*
- (b) *Quaere modos levioire plectro.*

Rearrange as a hexameter:

*Qui et tibi et urbi consulit in ambiguo servet.*

And as a pentameter:

*Dum Simois volvet in mare rapidas aquas.*

Mark the quantity of each syllable in *nimis, rivendi, consolor, solitudo.*

### 4. Explain any four of the following: *nota censoria, locare opera publica, iustitium edicere, rude donatus, signa convellere, propinare, deverti ad aliquem, Cicero Attico S. P. D.*

## LOWER GREEK—THREE HOURS.

(All Candidates must satisfy the Examiners both in translation into English and translation into Greek.)

### I. Translate:

Καὶ ναὶ μὰ Δι', ἔφη ὁ Σωκράτης, Κῦρός γε, εἰ ἐβίωσεν, ἄριστος ἂν δοκεῖ ἀρχῶν γενέσθαι. οὗτος τοίνυν ὁ Κῦρος λέγεται Λυσάνδρῳ, ὅτε ἦλθεν ἄγων αὐτῷ τὰ παρὰ τῶν συμμάχων ὄντα, τὸν ἐν Σάρδεσι παράδεισον ἐπιδεικνύναι. ἐπεὶ δὲ ἐθαύμαζεν ὁ Λύσανδρος ὡς ὀρθοὶ οἱ στίχοι<sup>1</sup> τῶν δένδρων εἶεν, εἶπεν· "Ἄλλ' ἐγὼ τοι, ὦ Κῦρε, πάντα μὲν ταῦτα θαναμάζω ἐπὶ τῷ κάλλει, πολὺ δὲ μᾶλλον ἀγαμαὶ τοῦ διαμετρήσαντός σοι καὶ διατάξαντος ἕκαστα τοιῶν." ἀκούσας δὲ ταῦτα ὁ Κῦρος ἤσθη τε καὶ εἶπεν· "Ταῦτα τοίνυν," ὦ Λύσανδρε, ἐγὼ πάντα καὶ διεμέτρησα καὶ διέταξα, ἔστι δ' αὐτῶν," ἔφη, "ἃ καὶ ἐφύτευσα<sup>2</sup> αὐτός." καὶ ὁ Λύσανδρος, ἀποβλέψας εἰς αὐτὸν καὶ ἰδὼν τῶν ἱματίων τὸ κάλλος ὧν εἶχεν, εἶπεν· "Τί λέγεις, ὦ Κῦρε; ἢ γὰρ σὺ ταῖς σαῖς χερσὶ τοιῶν τι

<sup>1</sup> στίχοι. rows.

<sup>2</sup> φυτεύειν. to plant.

ἐφύτευσας;" καὶ ὁ Κύρος ἀπεκρίνατο· "Θαυμάξεις τοῦτο, ὦ Λύσανδρε; ὁμνυμί σοι τοὺς θεοὺς, ὅτάνπερ ὑγιαίνω, μηδεπώποτε δειπνήσαι πρὶν ἰδρῶσαι ἢ τῶν πολεμικῶν τι ἢ τῶν γεωργικῶν ἔργων μελετῶν". καὶ ὁ Λύσανδρος ἀκούσας ταῦτα εἶπεν· "Δικαίως μοι δοκεῖς, ὦ Κύρε, εὐδαίμων εἶναι· ἀγαθὸς γὰρ ὢν ἀνὴρ εὐδαιμονεῖς".

## II. GRAMMAR.

### 1. Give:

- (a) Dat. sing. and dat. plur. of γυνή, ἀνὴρ, ναῦς, ὄρνις.  
 (b) Gen. sing. and nom. plur. of ἱππεύς, βούς, λύρα, γλῶττα.  
 (c) Dat. plur. (all genders) of οὗτος, τοιόσδε, μέγας, τιθείς.

2. Compare πολὺς, μέλας, νέος. Give the Greek for *fifth, sixth, ninth, 14, 90, 20,000*.

3. (a) Give the 3rd sing. fut. indic. with act. meaning of ἔχω, καίω, ἀπόλλυμι, καλῶ.

(b) Give the aor. infin. pass. of θύω, τίθημι, πράττω, νομίζω.

(c) Give the perf. infin. pass. of ὀρώ, βλέπω, τιμῶ, φυλάττω.

4. Parse, giving the principal parts of each verb: ἤθελεν, ἐπιθεῖναι, ἀπῆγτε, ἐπρίατο, ἥρπακέναι.

5. Mark the quantities of the vowels α, ι, υ in the following words: τιμή, πέπραγα, τύχη, ψυχή, βραχύς, τραχύς.

6. Translate carefully, explaining the syntax:

- (a) δέδοικα μὴ ἀπίωσιν.  
 (b) οἶδά σε σοφὸν ὄντα.  
 (c) φημὶ βελτίων εἶναι σοῦ.  
 (d) μὴ ὧς τὸ βιβλίον τῷ παιδίῳ.  
 (e) εἴ συ παρήσθα, οὐκ ἂν ἀπέθανον.

## III. SENTENCES.

1. I delight in doing good to my friends.
2. If you had told him this, he would now be alive.
3. He was convicted of murder and put to death.
4. I knew that no one would come.
5. It is considered disgraceful among us to run away from battle.

## HIGHER GREEK.

### FIRST PAPER—Two Hours.

(All Candidates must satisfy the Examiners both in Composition and in Translation.)

### I. Translate:

*What the Athenians owed to their Ancestors.*

Πηλείστων μὲν οὖν ἀγαθῶν αἰτίους καὶ μεγίστων ἐπαίνων ἀξίους ἡγοῦμαι γεγενῆσθαι τοὺς τοῖς σώμασιν ὑπὲρ τῆς Ἑλλάδος προκινδυνεύσαντας· οὐ μὴν

οὐδὲ τῶν πρὸ τοῦ πολέμου τούτου γενομένων δίκαιον ἀμνημονεῖν. ἐκείνοι γὰρ ἦσαν οἱ τὰ πλήθη προτρέψαντες ἐπ' ἀρετὴν καὶ χαλεποὺς ἀνταγωνιστὰς τοῖς βαρβάροις ποιήσαντες. οὐ γὰρ πρὸς ἀργύριον τὴν εὐδαιμονίαν ἐκρινον, ἀλλ' οὗτος ἐδόκει πλοῦτον ἀσφαλέστατον κεκτήσθαι καὶ κάλλιστον, ὅστις τοιαῦτα τυγχάνοι πράττων ἐξ ὧν αὐτὸς τε μέλλοι μάλιστα<sup>1</sup> εἰδοκιμήσειν καὶ τοῖς παισὶ μεγίστην δόξαν καταλείψειν, καὶ δεινότερον ἐνόμιζον εἶναι κακῶς ὑπὸ τῶν πολιτῶν ἀκοῦειν ἢ καλῶς ὑπὲρ τῆς πόλεως ἀποθνήσκειν. τοιαύταις διανοαῖς χρώμενοι, καὶ τοὺς νεωτέρους ἐν τοῖς τοιοῦτοις ἤθεσι παιδεύοντες, οὕτως ἄνδρας ἀγαθοὺς ἀπέδειξαν τοὺς πολεμήσαντας πρὸς τοῖς ἐκ τῆς Ἀσίας, ὥστε μηδένα πώποτε δυνηθῆναι περὶ αὐτῶν μήτε τῶν ποιητῶν μήτε τῶν σοφιστῶν ἀξίως τῶν ἐκείνους πεπραγμένων εἰπεῖν.

## II. Translate one of the following passages :

### (1) *Aias rescues the Body of Patroclus from Hector.*

Ἔκτωρ μὲν Πατρόκλον ἐπεὶ κλυτὰ τεύχε' ἀπήιρα,  
ἔλχ'. ἔν' ἀπ' ὤμου κεφαλὴν τάμοι δαΐει χαλκῷ,  
τόν δὲ νέκυν Τρωῆσιν ἐρυσσάμενος κυσὶ δοίη.  
Αἴας δ' ἐγγύθεν ἦλθε φέρων σάκος ἥτε πύργον·  
Ἔκτωρ δ' ἄψ' ἐς ὄμιλον ἰὼν ἀνεχάξεθ' ἐταίρων,  
ἐς δίφρον δ' ἀνόρουσε· δίδου δ' ὃ γε τεύχεα καλά  
Τρῳσὶ φέρειν προτὶ ἄστυ, μέγα κλέος ἔμμεναι αὐτῷ.  
Αἴας δ' αὖφι Μενoitιάδῃ σάκος εὐρὺ καλύψας  
ἐστήκει ὡς τις τε λέων περὶ οἷσι τέκεσσιν,  
ὃ πάρ τε νῆπι' ἄγοντι συναντήσωνται ἐν ἰλῇ  
ἄνδρες ἐπακτῆρες· ὁ δὲ τε σθένεί βλεμμαίνει,  
πᾶν δὲ τ' ἐπισκύνιον<sup>1</sup> κάτω ἔλκεται ὅσσε καλύπτων·  
ὡς Αἴας περὶ Πατρόκλῳ ἥρωϊ βεβήκει.  
Ἀτρεΐδης δ' ἐτέρωθεν, ἀρηϊφίλος Μενέλαος.  
ἐστήκει, μέγα πένθος ἐνὶ στήθεσσι ἀέζων.

<sup>1</sup> ἐπισκύνιον, brows.

### (2) *Iphigenia's Last Appeal.*

Εἰ μὲν τὸν Ὀρφῆως εἶχον, ὦ πάτερ, λόγον,  
πεῖθειν ἐπάδουσ', ὥσθ' ὁμαρτεῖν μοι πέτρας,  
κηλεῖν τε τοῖς λόγοισιν οὓς ἐβουλόμην,  
ἐνταῦθ' ἂν ἦλθον. νῦν δὲ τὰπ' ἐμοῦ σοφά,  
δάκρυα, παρέξω· ταῦτα γὰρ δυνάίμεθ' ἂν.  
μή μ' ἀπολέσης ἄωρον· ἡδὺ γὰρ τὸ φῶς  
βλέπειν· τὰ δ' ὑπὸ γῆς μή μ' ἰδεῖν ἀναγκάσης.  
πρώτῃ σ' ἐκάλεσα πατέρα καὶ σὺ παῖδ' ἐμέ·  
πρώτῃ δὲ γόνασι σοῖσι σῶμα δοῦσ' ἐμὸν  
φίλας χάριτας ἔδωκα κἀντεδεξάμην  
λόγος δ' ὁ μὲν σὺς ἦν ὁδ'· “Ἰ· Ἀρά σ', ὦ τέκνον,  
εὐδαίμων' ἀνὴρ ἐν ὁμοίῳ ὄψομαι,  
ζῶσάν τε καὶ θάλλουσαν ἀξίως ἐμοῦ·”  
τούτων ἐγὼ μὲν τῶν λόγων μνήμην ἔχω,  
σὺ δ' ἐπιλέλῃσαι, καὶ μ' ἀποκτεῖναι θέλεις.

## SECOND PAPER—Two Hours.

(All Candidates must satisfy the Examiners in Prose Composition.)

## I. FOR GREEK PROSE COMPOSITION.

Though we had suffered such hardships already, we knew that we should be in far greater danger if we did not discover in what manner of country we were. Next day, accordingly, we ascended a hill, which we had seen at no great distance from the sea, and looked eagerly in every direction. We saw at once that we were upon an island, and we seemed to be the only human beings in it. There was no other land near us, and we could not see any ship. There was, therefore, little hope that we should ever make our escape, unless some vessel should happen to be driven towards us by a storm. Never again, we thought, should we see our wives and children, who would remain ignorant whether we were living or dead.

## II. GRAMMAR.

1. Give the future, aorist and perfect in *Attic usage* (1st sing. ind. with action meaning) of βαδίζω, προσκαλῶ, κατέρχομαι, ἀπαγορεύω, ὑπακούω, κεριαρῶ.

2. Distinguish αἰσχύνομαι ταῦτα λέγειν, αἰσχύνομαι ταῦτα λέγων; εἰπὼν σοι ἀπίναί, εἰπὼν σοι ὅτι ἄπειμι; οἶδα τῶν ἄλλων κρατεῖν, οἶδα τῶν ἄλλων κρατῶν.

3. Translate, with a note on the syntax :

(a) εἰ γὰρ παρῆσθα, ἵνα μὴ ταῦτ' ἐγένετο.

(b) ἀπῆλθε πρὶν ἐμὲ ἤκειν οἴκαδε.

(c) Σωκράτης ἀσεβείας ἀλοῦς ἀπέθανε.

(d) οὐκ ἂν οἶμαί σε ταῦτα ὀρᾶν.

(e) φημί πολλὰ ἀγάθ' ἂν γενέσθαι τοῖς πολίταις εἰ τὰ δέοντα ἐποίησαν.

4. Translate into Greek :

(a) He delights in doing good to his friends.

(b) He said he did not know that the general was dead.

(c) If you had told him so then, he would now be alive.

(d) We ought to obey whoever the people elects as general.

(e) In this tragedy no one is killed by anybody.

5. Scan either (a) or (b) noting any peculiarities and marking the caesura :

(a) ἄγρει δὴ, πυρ κῆρον ἐνὶ μεγάροισι, Μελανθεῦ.

(b) δοῦλη κεκληῖσθαι βασιλὶς οὐδ' αἰσχύνομαι.

Rearrange as iambic trimeters :

(a) ὁ θεὸς ἅπαντα ἐξεργάζεται σιγῶν.

(b) σμικρὰ ῥοπή εἰνάζει παλαιὰ σώματα.

## LOWER MATHEMATICS.—THREE HOURS.

(A Candidate may obtain FULL marks by doing about two-thirds of this Paper. But the Examiners may reject a Candidate who shows exceptional weakness in any of the sections A, B, C.

Marks will not be awarded to answers where the work is not shown.)

## A.

1. Calculate to three decimal places, by contracted methods of multiplication and division, the value of

$$20.85 \times 14.67$$

$$27.39 \times 17.96$$

2. The quotient of two numbers is 5.8, and their product is 288.2745; find the numbers.

3. Show that a fraction is not altered by multiplying the numerator and denominator by the same number.

Find the value of  $\frac{\frac{2}{3} + \frac{1}{5} - \frac{1}{2}}{\frac{2}{3} - \frac{5}{12}}$ .

What is the percentage error in taking the result as 4?

4. A dividend was £15. 13s. 6d. after deduction of income tax at 1s. per £. Calculate the amount of tax deducted.

5. A, B and C enter into partnership, A contributing £5000, B £4500 and C £2500. The profits after the deduction of 4 per cent. for a reserve fund are to be divided in proportion to the capital subscribed. At the end of the first year B receives £270; find the year's total profits.

## B.

6. Find the factors of the following expressions :

(i)  $12x^2 + 19ax - 18a^2$ ;

(ii)  $(x-1)(2x^2+5x+3) \div (x+1)(2x^2-3x+1)$ .

For what values of  $x$  does the expression (i) vanish?

7. (i) Express as a single fraction in its lowest terms

$$\frac{1}{x+3} - \frac{2(2-x)}{3-x} - \frac{x-15}{x^2-9}$$

(ii) Solve the equation

$$\frac{x}{x-a} - \frac{x+a+b}{x+a} - \frac{a-b}{x} = 0.$$

8. For what values of A, B and C is the equation

$$\frac{8x+1}{x(4x^2-1)} = \frac{A}{2x-1} + \frac{B}{x} + \frac{C}{2x+1}$$

an identity?

9. Solve the equations :

(i)  $(x^2+3x+2)^2 = 6(x^2+3x+2)$ ;

(ii)  $x+6y-(3x-3y+5) = y+2x-2(2y+3x+3) = \frac{2}{3}y-x$ .

10. Show that the square of the sum of any four numbers is equal to the sum of their squares together with twice the product of every pair.

11. A line 12 inches long is divided into two parts such that the square on one part is equal to three times the rectangle contained by the whole line and the other part; find to the nearest hundredth of an inch the lengths of the two segments.

C.

12. If two triangles have equal corresponding sides, their corresponding angles are equal.

The line joining the centres of two intersecting circles bisects the common chord perpendicularly.

13. The square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the sides containing the right angle.

The angle  $C$  of a triangle  $ABC$  is a right angle and the sides  $BC$ ,  $AC$ , are  $a$  and  $b$  units long; find the length of the perpendicular from  $C$  on the hypotenuse.

14. The angle  $C$  of a triangle  $ABC$  is acute and  $AD$  is perpendicular to  $BC$ ; show that

$$AB^2 = BC^2 + CA^2 - 2BC \times CD.$$

If  $AB=15$ ,  $BC=14$  and  $CA=13$  inches, find the length of  $AD$  and the area of the triangle.

15. Give with proof a construction for drawing a tangent to a given circle from a given point without it.

Show how to draw through any given internal point  $P$  a chord of a given circle equal in length to a given line  $AB$ .

Is this always possible?

16. If two angles  $ACB$  and  $ADB$  be equal and on the same side of  $AB$ , prove that  $A$ ,  $B$ ,  $C$ ,  $D$  lie on a circle.

Find the locus of the intersections of the perpendiculars from the vertices of a triangle on the opposite sides, if the base and the vertical angle are given.

17. The angle between a chord of a circle and the tangent at an extremity of the chord is equal to the angle in the alternate segment.

Two circles touch and through the point of contact  $A$  two lines  $BAC$ ,  $DAE$  are drawn cutting one circle in  $B$  and  $D$  and the other in  $C$  and  $E$ ; prove that  $BD$  is parallel to  $CE$ .

## INTERMEDIATE AND HIGHER MATHEMATICS.

### FIRST PAPER—Two Hours.

(A Candidate may obtain FULL marks by doing correctly about two-thirds of this Paper; but the Examiners may reject a Candidate who shows exceptional weakness in any of the sections A, B, C.

The pass mark for Intermediate Candidates is fixed with reference to the total number of marks assigned to questions which fall under the

*syllabus of the Intermediate Standard ; but such Candidates will receive credit for any question they may answer.*

*Marks will not be awarded to answers where the work is not shown.)*

## A.

1. A man increases his deposit in a bank by £310. On the day he does this the rate of interest is raised from  $2\frac{1}{2}$  to 4 per cent. If his next month's interest is greater by £2. 9s. 11d., find his original deposit.

2. State a rule for calculating rapidly the coefficients in the expansion of  $(1+x)^n$ , when  $n$  is not very large.

Find the coefficients of  $x^6$  in

$$(x+1)^3(x-1)^5+(x+1)^5(x-1)^3.$$

3. Determine  $p$  in order that the system of equations  
 $x+2y-3z=0$ ,  $x+y-z=0$ ,  $x+py+2z=0$   
 may admit of solutions other than  $x=0$ ,  $y=0$ ,  $z=0$ .

Solve the system

$$x+2y-3z=0, \quad x+y-z=0, \quad x^2+y^2+z^2-x-y-z=0.$$

4. Find the G.C.M. of

$$x^4-x^3+2x^2+x+3 \quad \text{and} \quad x^4-3x^3+6x^2-5x+3.$$

5. Two integers consist each of the same two digits, but in different order. If the sum of the two be 165, and their product 6786, find them.

## B.

6. Prove that the perpendicular bisectors of the sides of a triangle are concurrent.

Show how to construct a circle which has a given radius, passes through a given point, and cuts off a given length upon a given straight line.

7. Prove that the square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on its sides.

$ABC$  is right-angled at  $C$  and  $CL$  is drawn perpendicular to  $AB$  meeting  $AB$  in  $D$ ; prove that

$$CL^2=AL \cdot LB.$$

8. Prove that the area of a trapezium is equal to the rectangle contained by half the sum of its parallel sides and the distance between them.

$CD$  is a diameter of a circle of 15 feet radius.  $AB$  and  $EF$  are chords parallel to  $CD$  and distant 8 and 7 feet from it respectively. Find the number of square feet in the convex hexagon  $ACEFDB$ , to two places of decimals.

9.  $ABCDE$  is a regular polygon (not necessarily closed), in which  $AB=BC=CD=DE$ , and the angles  $ABC$ ,  $BCD$ ,  $CDE$  are all equal. Prove that  $A$ ,  $B$ ,  $C$ ,  $D$ ,  $E$  all lie on the same circle; and that  $AB$ ,  $BC$ ,  $CD$ ,  $DE$  all touch the same circle.

The closed polygon  $ABCDE$  is inscribed in a circle of which  $AE$  is the diameter, and  $AB=BC=CD=DE$ . Prove that

$$\frac{DE}{AD}=\sqrt{2}-1.$$

10. A line drawn parallel to the base of a triangle cuts the sides in the same ratio.

The base of a triangle is fixed in magnitude and position, and its vertex moves on a straight line: find the locus of its centroid (centre of gravity).

C.

11. Define  $\tan x$  for all values of the angle  $x$ : and draw the graph of  $y = \tan x$ .

Draw the graph of  $y = (\cos x + \sin x)/(\cos x - \sin x)$ .

12. Prove that  $\sec^2 x - \tan^2 x = 1$ .

Prove that  $\frac{1 + \cos \theta}{\sec \theta - 1} - \frac{1 - \cos \theta}{\sec \theta + 1} = 4 \cot^2 \theta$ .

13. Prove that  $\tan 2\theta = 2 \tan \theta / (1 - \tan^2 \theta)$ .

Solve as generally as you can the equation

$$\sin^2 \theta + \sin 2\theta = 1.$$

(Use the tables.)

## SECOND PAPER—Two Hours.

(A Candidate may obtain FULL marks by doing correctly about TWO-THIRDS of the questions in each section of this Paper. But the Examiners may reject a Candidate who shows exceptional weakness in any of the sections A, B, C.

The pass mark for Intermediate Candidates is fixed with reference to the total number of marks assigned to questions which fall under the syllabus of the Intermediate Standard; but such Candidates will receive credit for any question they may answer.

Marks will not be awarded to answers where the work is not shown.)

A.

1. Solve the quadratic  $x^2 + 21.2x + 39.1 = 0$ , giving each root correct to two places of decimals.

2. State the condition that  $x^2 + px + q$ , where  $p$  and  $q$  are rational numbers, may be decomposable into two factors whose coefficients are rational numbers.

(i) Factorize completely  $x^6 - 6x^4 + 11x^2 - 6$ .

3. Express

$$\frac{x-a}{x+a} + \frac{x-b}{x+b} + \frac{x-c}{x+c}$$

as a single rational fraction.

4. If  $x = (y+a)/(y+b)$ , and  $y = (z+a)/(z+b)$ , for what particular values of  $x$  is  $x$  equal to  $z$ ?

Solve the system:

$$x^2 + y^2 + x + y = 0, \quad x^2 - y^2 + x - 2y = 0.$$



5. If  $a:b=b:c=c:d$ , and  $a, b, c, d$  be all real positive quantities, prove

(i) that  $a+d > b+c$ ;

(ii)  $\frac{a^2+b^2}{c^2+d^2} = \frac{a^4}{b^4}$ .

6. Determine the general shape of the graph of the following :

$$y = \frac{x-1}{x-2}.$$

### B.

7. A diameter of a circle bisects a chord, prove that it cuts it at right angles. State and prove the converse.

Find the locus of the mid-points of all chords which pass through a given point.

8. If two circles touch internally, show that the two centres and the point of contact are collinear.

Two circles touch internally at  $O$ .  $OPQ$  meets the inner circle in  $P$ , the outer in  $Q$ . A tangent from  $Q$  to the inner circle meets the outer again in  $S$ , and the tangent to the inner circle at  $P$  in  $R$ . Prove that

$$QR \cdot QS = QP \cdot QO.$$

9. Prove that equiangular triangles are similar.

The triangle  $ACB$  is right-angled at  $C$ .  $CD$  is perpendicular to  $AB$ , and  $DE$  and  $DF$  perpendicular to  $BC$ , and  $AC$  respectively; prove that

$$AF^2 - CF^2 + BE^2 - CE^2 = (AD - BD)^2.$$

10.  $ABC$  is a triangle about which is circumscribed the circle  $ABEC$ . If  $AE$  be the diameter of the circle, and  $AD$  the perpendicular from  $A$  on  $BC$ , prove that

$$AD \cdot AE = BA \cdot AC.$$

The sides of a triangle are 7, 7, and 5 feet long respectively: calculate the diameter of the circumscribing circle to two places of decimals.

11. Prove that a set of three given parallel planes cuts all transversal straight lines in the same ratio.

Prove that the volume of a regular tetrahedron whose edge is  $a$  is equal to the volume of a cube whose edge is  $a/\sqrt[3]{2}$ .

### C.

12. Calculate the trigonometrical ratios of an angle of  $30^\circ$ .

Assuming those of  $45^\circ$ , calculate  $\sin 15^\circ$  to three places of decimals.

13. Find an expression for the area of a triangle in terms of its base and base angles.

Given  $a=3.62$ ,  $B=20^\circ 15'$ ,  $C=35^\circ 14'$ , calculate the area of the triangle as accurately as the tables permit.

14. If  $R$  be the radius of the circumcircle of the triangle  $ABC$ , prove that  $R = a/2 \sin A$ .

$ABC$  is a triangle;  $P$  any point in  $BC$ , such that  $BP=x$ ; and  $Q$  and  $R$  are the projections of  $P$  on  $AC$  and  $AB$  respectively: prove that

$$QR = \sqrt{(x^2 + c^2 - 2cx \cos B)} \cdot \sin A.$$

## FRENCH.

## FIRST PAPER—Two Hours.

## I.

Translate into French :—

In the latter half of the eighteenth century the attention of educated society on the continent of Europe was drawn to Scotland by two new attractions. The publication of the so-called Poems of Ossian by James Macpherson revealed to the world some of the romantic interest of the scenery and tradition of the Western Highlands. The keen dispute that arose over the genuineness of these poems, while it served to make them more widely known, does not seem to have diminished the power of their fascination.

To these poems must be assigned no small share of the impulse which started the romantic school of our literature, and changed the old prevalent aversion of mountain scenery into an ever-growing appreciation of the charms of wild nature.

The second Scottish attraction was the discovery of the scenic wonders of the Isle of Staffa, among the Hebrides, made by Sir Joseph Banks in the year seventeen hundred and seventy-two. For many years before that date the Giant's Causeway on the coast of Antrim had drawn an increasing number of pilgrims to view the striking cliffs of the Irish shore. But the descriptions and drawings published of the Scottish isle revealed an even more extraordinary development of the same type of scenery.

## II. FREE COMPOSITION.

Write an essay *in French* of not more than *two* pages on *one* of the following subjects :—

(a) Les rivières : leur origine, leurs cours, leur utilité, leur poésie.

Or, (b) Indiquez les avantages et les inconvénients des diverses manières de voyager : en voiture, en chemin de fer, en bateau, à pied.

## SECOND PAPER—Two Hours.

## I.

Traduire en anglais :—

Je me souviens du moment précis où, pour la première fois, je pris contact direct avec l'ancienne France. J'avais douze ans, et du haut des bastions de Québec je contemplais la perspective du Saint-Laurent, un des plus nobles fleuves que les matelots de France aient jamais suivis.

*Montcalm, Montmorency, Montréal*, ces noms, avec leurs assonances nouvelles, m'auraient dépaycé, si je n'eusse pas lu *Athalie*. C'était le seul livre français que je connusse dans ce temps-là. On nous l'avait donné à l'école, pour nous convaincre, peut-être, que les Français ne sont pas le peuple frivole qu'ils sont censés être dans l'opinion de tout pays protestant. A la lecture d'*Athalie* je m'étais un peu refroidi, et

beaucoup ennuyé. Cependant, sur les bastions de Québec, où, malgré l'occupation anglaise, se respire encore beaucoup de l'air de France, je pensai à Racine, et il ne me sembla plus si lointain.

W. MORTON-FULLARTON.

## II.

Traduire en anglais :—

Les vers sont plus beaux que la prose.  
 Quel prosateur aura le prix  
 Sur Virgile et l'aurore rose,  
 Sur Shakespeare et l'aube aux yeux gris ?

Le vers, c'est l'âme cadencée,  
 Avec la douceur d'un berceau :  
 A la fois musique et pensée,  
 C'est un esprit, c'est un oiseau.

Il vole, il plane, et sur la terre  
 Il rapporte à nos faibles cœurs  
 L'extase du divin mystère,  
 Le rythme des célestes chœurs.

E. BLÉMONT.

## III. GRAMMAR AND PHILOLOGY.

(Answer TWO of the following questions.)

1. Translate into French :—

- (a) Are they rich?—Yes they are.
- (b) Are you not very pleased with that pupil?
- (c) He repented sincerely and made apologies.
- (d) Since you have a good book, you should make use of it.
- (e) Don't laugh at everything I say.

2. Form French sentences with the following words, and translate your sentences into English :—

- (a) *tellement*.
- (b) *sitôt*.
- (c) *plutôt*.
- (d) *à moins que*.
- (e) *aussi*.

3. Either quote five of the most common prefixes used in the formation of French words, and illustrate their meaning by means of examples ;

Or, explain historically the formation of the various tenses of the regular verbs of the 1st conjugation.

## IV. LITERATURE.

(Answer ONE question.)

5. (a) Which of Lafontaine's Fables of Book VII. do you like best ? State your reasons fully and contrast your favourite and what you consider its various merits with some of the other fables of the same book.

Or (b) Account for the ridiculousness of M. Jourdain. What other

comedies, besides the *Bourgeois Gentilhomme*, did Molière write? Describe the most important of them very briefly.

Or (c) Describe the character of Don Ruy Gomez, and give a sketch of the life of V. Hugo, with special reference to his career as a dramatist.

Or (d) *Pau* and *Henry IV.*, as described in the "Voyage aux Pyrénées." What do you know of Taine as a critic and historian?

## GERMAN.

### FIRST PAPER—TWO HOURS.

(The Candidate may use either English or German Script.)

Translate:—

(a) He spoke of his doctrine to this man and that; but the most treated it with contempt, with indifference: in three years, I think, he had gained but thirteen followers. His progress was slow enough. His encouragement to go on was altogether the usual encouragement that such a man in such a case meets. After some three years of small success, he invited forty of his chief kindred to an entertainment: and there stood up and told them what his intentions were: that he had his doctrine to preach to all men: that it was the highest thing, the one thing, which of them would second him in that? Amid the doubt and silence of all, young Ali, as yet a lad of sixteen, impatient of the silence, started up, and exclaimed in passionate, fierce language, that he would! . . . As for this young Ali, one cannot but like him. A noble-minded young fellow, as he showed himself then and afterwards. Something chivalrous in him: brave as a lion; yet with a grace and affection worthy of Christian knighthood.

(b) *Aufsatz* in deutscher Sprache von etwa anderthalb Seiten über einen der folgenden Gegenstände:—

(1) Das Leben eines Fischers.

(2) Lebensgeschichte einer Eiche: Pflanzung, Wachstum, Umgebung, Schönheit und Nützlichkeit, Einfluß der Jahreszeiten, Verwertung als Möbel oder zu anderen Zwecken.

### SECOND PAPER—TWO HOURS.

(The Candidate may use either English or German Script.)

#### I.

Translate:—

(a) Unter der Regierung des Kaisers Titus fand jener merkwürdige Ausbruch des Vesuv statt, bei dem der Naturforscher Plinius als Opfer seiner Wißbegierde den Tod fand.

Aus der Feder seines gleichnamigen Neffen besitzen wir eine ausführliche Beschreibung jenes Ereignisses. Am 24 August des Jahres 79 wurde Plinius, der sich als Befehlshaber der Staatsflotte mit seinem Neffen zusammen in Misenum befand, um die siebente Tagesstunde, also etwa ein Uhr nach unserer Zeitrechnung, auf eine Rauchsäule von auffallender Gestalt aufmerksam gemacht, die, einer Fichte ähnlich, erst einen hoch aufsteigenden dichten Stamm bildend, dann sich in mehrere Zweige ausbreitend, vom Vesuv aufstieg. Von seiner Amtspflicht, nicht minder aber von seiner glühenden, nie rastenden Wißbegierde angetrieben, ließ er sofort ein Schiff ausrüsten, um den dortigen Küstenbewohnern womöglich Hilfe zu bringen, und zugleich das Naturereignis in größerer Nähe zu betrachten. Die Fahrt war durch den immer dichter und heißer werdenden Regen von Nässe und kleinen Steinen und durch das stürmisch bewegte, bis in den Grund erregte und erschütterte Meer aufs äußerste erschwert und gefährdet; er setzte sie gleichwohl fort, immer die Vorgänge aufmerksam verfolgend und seine Beobachtungen dem Schreiber diktierend, bis nach Stabia, wo er ausstieg und sich nach der Villa seines Freundes Pomponianus begab. Hier brachte er den Rest des Tages und die folgende Nacht unter den gewöhnlichen Beschäftigungen oder ruhig schlafend zu, bis der Nischenregen die Umgebung des Hauses bis zu einer Höhe anfüllte, daß die Bewohner fürchten mußten, sich den Ausweg versperrt zu sehen.

KARL PETER.

- (b) 1. Erfrischend sinkt der Abend  
Herab auf Feld und Au  
Und sendet mild erlabend  
Den Blüten seinen Tau.
2. Und durch des Laubdachs Ritze  
Blickt Blutgewölk herab  
Und spiegelt einz'le Blige  
Im nahen Springquell ab.
3. Schon düster ist's hier innen,  
Doch fern winkt roß'ger Schein,  
Und Purpurfäden spinnen  
Sich durchs Gezweig herein.

4. Die Vögel flattern müde  
Dem dunkeln Dickicht zu,  
Und mit dem letzten Niede  
Entschlummern sie zur Ruh'.

## II. GRAMMAR AND PHILOLOGY.

(Answer any TWO of the following questions.)

1. Construct complete sentences with: *freuen, gelingen, fehlen, reuen, ärgern*, used impersonally. Give also the English translation of your sentences.
2. Give the English of and comment on :—  
Er wollte ihn nicht gesehen haben.  
So etwas läßt sich leicht denken.  
Er soll sich verlobt haben.  
Er ließ ihn zu Hause bleiben (two different meanings).  
Man wende sich an den Herrn Direktor.
3. Explain the relation of meaning between any ten of the following words which are related etymologically: *flein, clean; Baum, town; teilen, deal; dicht, tight; Knecht, knight; zerren, tear.*

## III. LITERATURE.

(Answer ONE of the following questions.)

1. The historical elements and patriotic sentiment in *Minna von Barnhelm*. What has Lessing done for German Literature?
2. Which of Schiller's Ballads do you like best? State your reasons. What do you know of Schiller as a dramatist?
3. Describe the contrast drawn in *Soll und Haben* between the Merchant and the Nobleman. State what you know of Gustav Freytag as a novelist.
4. The character of Goethe's father and mother. Give a sketch of Goethe's life and say what you know of his *Faust* or his *Egmont* or his lyric poems.

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## ITALIAN.

### FIRST PAPER—Two Hours.

Translate into Italian :—

Nor must I forget to say a word on bivouacs. You come to a milestone on a hill, or a place where deep ways meet under trees, and off goes your knapsack, and down you sit to smoke a pipe in the shade.

You sink into yourself and the birds come round and look at you : and your smoke dissipates upon the afternoon under the blue dome of heaven ; and the sun lies warm upon your feet, and the cool air visits your neck and turns aside your open shirt. If you are not happy you must have an evil conscience. You may dally as long as you like by the roadside. It is almost as if the millennium were arrived, when we shall throw our clocks and watches over the housetop, and remember time and seasons no more.

R. L. STEVENSON.

Virgil hath given us his poem in twelve books, an argument of his modesty ; for by that, doubtless, he would insinuate that he pretends to no more than half the merit of the Greek (Homer) : for the same reason our Milton went originally no farther than ten ; till being puffed up by the praise of his friends, he put himself on the same footing with the Roman poet. . . . It becomes an author generally to divide a book as it does a butcher to joint his meat, for such assistance is of great help to both the reader and the carver.

FIELDING.

Free Composition :—

Che altri divertimenti ci saranno nel millennio, oltre quello di tirare gli orologi sui tetti ?

## SECOND PAPER—TWO HOURS.

### I.

Translate into English :—

#### (a) NELLE SUPREME ALTEZZE.

Ora un cielo limpidissimo sorride alle cime, e sotto ai nostri piedi rimbombano tuoni, guizzano saette, le valli giacciono avviluppate nelle nebbie fosche. Da un istante all' altro si spalancano immensi orizzonti, sorgono, rischiarati dal sole, picchi fino allora invisibili, si formano nuvole che, come aeree montagne, si allargano, si restringono, errano : e scoppiano in piogge e in procelle, o negli eterei splendori si dileguano in sottilissimi veli d'argento, di popora e d'oro.

Nelle supreme altezze non piove. La neve non cade più a fiocchi, ma a folate sottilissime di polvere, di aghi, di stelline lucenti. Nei silenzi vasti s'odono ognitanto rumori lontanissimi : tintinnii di mandre, canti di pastori, gemiti di foreste.

PAOLO LIOY.

#### (b) IL GRIDO TRIOUFALE DELLA SUPERBIA.

Tremò Parigi e turbidossi Senna  
all' alta voce, a quell' orribil grido :  
rimbombò il suon fino alla selva Ardenna  
sì, che lasciâr lutte le fiere il nido.  
Udiron l'Alpi e il monte di Gebenna,  
di Blaia e d'Arli e di Roano il lido ;  
Rodano e Sonna udi, Garonna e il Reno :  
si strinsero le madri i figli al seno.

ARIOSTO.

## II. GRAMMAR AND PHILOLOGY.

1. Give the irregular comparative and the irregular superlative of: *buono, cattivo, alto, basso, grande, piccolo*.

2. Translate:—

(a) Homer is greater than any other epic poet.

(b) I would like to go straight to Nice rather than stop a week in Paris.

(c) He concluded his speech with a verse out of Theocritus which signifies no more than, That sometimes it rains and sometimes the sun shines.

3. Explain the derivation of: *medaglia, melo, lancia, granito, cugino, si, così*.

## III. LITERATURE.

(ONE question only to be answered.)

1. Relate some of the most interesting episodes out of Benvenuto Cellini's autobiography.

2. Give the plot of one of Boccaccio's novelle.

3. What did Santa Caterina da Siena write? How did her writings affect her contemporaries and the general history of the fourteenth century?

4. Give the plot of one of Goldoni's comedies.

## CELTIC.

## FIRST PAPER—TWO HOURS.

1. Translate into Gaelic:—

For my part, I do not see any good reason why we, away in the North, or why others away to the West, have waited so long to be taught the use of our peat bogs. I am afraid this waiting was only a matter of silly fashion and prejudice, begotten of a false deference to the denizens of the coal-producing regions of Great Britain. This is no mere flight of fancy; nor is it a random shaft let fly at another people. It is a well-grounded conviction of mine that in too many things—I do not say in all—we in the Highlands neglect advantages which nature has given us, for no better reason than that the example of utilizing them has not been set in the Lowlands. England and the South of Scotland have their coal beds far down in the bowels of the earth; we have ours spread out on the face of the earth. The right way of following the example of England would have been to go to work at the peat which God gave us, as she did at her own coal.

2. Translate into English:—

(a) Ràinig e bun na beinne. Thòisich e air dìreadh an uchdaich chreagaich, chorraich, chas, gun sgìos gun sàruchadh. B' e 'm feasgar a bh' ann. Tha e nis 'na sheasamh air Horeb. Tha e nis ri urnuigh. Tha e làn do dhòchas agus do eagal. Tha fios aige gur e Dia a threoraich e do Horeb; ach c' arson a riun e sin, cha b' aithne dha.



Tha e nis am measg gharbhchrioch na beinne—creag air muin craige—leacanan eagalach ann an aimbreit namhasach—an droighionn agus corra-chraobh eile 'n sud 's an so. Cho robh fuaimean no coltas beò-ehrentair ann. Bha 'n oidhche tighin air—neoil an anmoich a' eruinneachadh mu 'n cuairt da. Cìod a ni e? imeachd air aghart cha 'n urrain da. Cha 'n eile da ach am fàsadh a 's fearr is urrain da iarraidh am measg nan creag. Shuain e a thrusgan mu 'thimchioll; air mhagaran chaidh e stigh do 'n uaimh; agus an sin leig se e fein 'na shineadh, air a dhìon o 'n drùchd agus o shileadh na h-oidhehe.

(b) Comhairlean Aithgears

'S iad na trì nithe a 's mo tha a dhìth air mac an duine sa' bheatha so, a thaobh na column, lòn, aodach, agus tàmh.

Nam b' àill leat tlachd a ghabhail ann ad lòn, agus blas taitneach a bhi air do ghnàth, gabh mo chomhairle agus saothairich air a shon.

Nam b' àill leat tlachd a bhi agad ann ad aodach, pàigh e mun cuir thu ort e.

Nam b' àill leat eadal agus tàmh agus snain shoerach fhaotainn, thoir deagh choguis ghlan leat do 'd leabaidh.

## SECOND PAPER—TWO HOURS.

1. How are Declensions distinguished in Gaelic? Give two examples in each Declension, showing the nominative singular, the genitive singular, and the nominative plural.

2. Conjugate fully the independent form of the verb *bi*.

3. Give four examples of idiomatic Gaelic phrases, and point out how the real meaning differs from the literal translation.

4. Write a short account of the life and poetry of any Highland Bard of the eighteenth century.

## HEBREW.

### FIRST PAPER—TWO HOURS.

I. Point and translate :

וַיְהִי אִמֶּר אֱלֹהִים אַחֲרֵי הַפֶּדְדָלוֹט מַעֲמֵי שֵׁן  
נָא עֵינֶךָ וְרָאָה מִן־הַמָּקוֹם אֲשֶׁר־אַתָּה שָׁם צִפְנָה  
וְנִגְבָּה וְקִדְמָה וַיֵּמָּה: כִּי אֶת־בְּלִלְחָאֲרֵן אֲשֶׁר־אַתָּה  
רָאָה לָךְ אֶת־נִגְבָּה וְלִזְרַעַךְ עַד־עוֹלָם: וַשְּׁמַתִּי אֶת־זֶרַעַךְ  
כַּעֲפַר הָאָרֶץ אֲשֶׁר אֶסְדֹּכַל אִישׁ לִמְנוֹת אֶת־עֵפֶר הָאָרֶץ  
גַּם זֶרַעַךְ יִמָּנֶה: קוֹם הִתְחַלֵּךְ בָּאָרֶץ לְאַרְבֶּה וּלְרַחֲבָהּ  
כִּי לָךְ אֶת־נִגְבָּה: וַיֹּאחֶל אֲבָרָם וַיָּבֹא וַיֵּשֶׁב בְּאֵלְנֵי מִמְרָא  
אֲשֶׁר בְּחִבְרוֹן וַיִּבְנֶה־שָׁם מִזְבֵּחַ לַיהוָה:

## II. Give the following in punctuated Hebrew :

When the Son of man shall come in his glory, and all the holy angels with him ; then shall he sit upon the throne of his glory ; and before him shall be gathered all nations ; and he shall separate them one from another, as a shepherd divideth his sheep from the goats ; and he shall set the sheep on his right hand, but the goats on the left. Then shall the king say unto them on his right hand, Come, ye blessed of my Father, inherit the kingdom prepared for you from the foundation of the world : for I was an hungered, and ye gave me meat ; I was thirsty, and ye gave me drink ; I was a stranger, and ye took me in ; naked, and ye clothed me ; I was sick, and ye visited me ; I was in prison, and ye came unto me. Then shall the righteous answer him, saying, Lord, when did we these things ? And the king shall answer and say unto them, Verily I say unto you, Inasmuch as ye have done it unto one of the least of these my brethren, ye have done it unto me.

## SECOND PAPER—Two Hours.

## I. Translate Genesis xlv. 18—29.

II. Parse ריגש (v. 18), יהר (v. 18), מת (v. 20), ויותר (v. 20), אהבו (v. 20), הורדהו (v. 21), יוכל (v. 22), תספון (v. 23), לרדת (v. 26).

III. (1) Prefix the Article with the proper pointing to the following : עֶמֶל, עֵיר, הָרֶב, הָקֵם, הָרֵשׁ, הָרִים, הַר, הַמִּיּוֹן, אֶבֶן, אֶזָּז.

(2) Prefix מִן with the proper pointing to the following : חֵיץ, אֱלֹהִים, הַמִּקְדָּשׁ, רֶעַ.

(3) Write the singular and plural of כהן with suffixes.

(4) Write the first singular Imperfect of all the conjugations of כון and שמים.

(5) Write the third person singular masculine Perfect and Imperfect of שמר and suffixes.

## DYNAMICS—THREE HOURS.

*A Candidate may obtain FULL marks by doing about two-thirds of this Paper.*

*Marks will not be awarded to answers where the work is not shown.*

1. Define *uniform* and *varying* velocity.

A point is moving in a straight line and the distance  $s$  feet described in the first  $t$  seconds of its motion is given by the equation

$$s = 3t^2 + 2t.$$

Find the distance described in the first 3 seconds and then in the first  $3+h$  seconds: find also the average velocity in this interval  $h$  seconds and the velocity at the end of the third second.

2. The distance  $s$  feet of a point moving in a straight line from a fixed point in the line  $t$  seconds after starting is given by the equation

$$s = s_0 + ut + \frac{1}{2}at^2;$$

describe the motion.

A stone is let fall from the ear of a balloon which is rising with a velocity 10 feet per second. If the stone reaches the ground 12 seconds after leaving the ear, calculate the height from which it has fallen, the resistance of the air being neglected.

3. A point moves in a circle of radius  $r$  feet and centre  $O$  with uniform velocity  $v$  feet per second. Show in a diagram and calculate the change of velocity as the point goes from  $A$  to  $B$ , the angle  $AOB$  being  $\theta$ . Hence or otherwise find the acceleration of the point in magnitude and direction.

4. A body is moving in a straight line and is acted upon by a single uniform force in that line. Shew that the work done on the body by the force is equal to the change of kinetic energy during the application of the force.

A train weighing 200 tons is running at 20 miles per hour on the level. Steam is shut off and the brakes applied. If the total resistance is 10 lbs. per ton, find what distance the train runs before the speed is reduced to 5 miles per hour.

5. A ball of mass  $m$  lbs. is moving with velocity  $v$  feet per second in a straight line. It is overtaken by a ball of mass  $M$  lbs. moving in the same line with velocity  $V$  feet per second. If after impact they move together with the same velocity, find this velocity and the diminution in the sum of their kinetic energies. What account can you give of this apparent loss of energy?

6. Describe an experiment for verifying the proposition known as "the parallelogram of forces."

Three forces  $P$ ,  $Q$ ,  $R$  of 2, 3 and 4 lbs. respectively act in the same plane at a point. If the directions of  $Q$  and  $R$  make angles of  $30^\circ$  and  $45^\circ$  with that of  $P$ , find the magnitude of the resultant.

7. Define the centre of gravity of a body and find it for a uniform triangular plate.

A uniform plate is in the shape of an isosceles triangle of side 13 inches and base 10 inches. A circular portion of diameter 3 inches is cut out. If the centre of this circle is on the perpendicular from the vertex on the base and 2 inches from the base, find the centre of gravity of the remaining portion. [ $\pi=22/7$ .]

8. State the conditions of equilibrium of a body acted upon by a system (say 4) of forces in one plane, when the directions of the forces do not all pass through the same point.

A uniform rod  $AB$ , 13 inches long and weighing  $W$  lbs., rests in a vertical plane with the end  $A$  against a wall and the end  $B$  on the

ground. The wall and the ground being supposed frictionless, the rod is kept in its place by a string  $CD$  tied to a point  $C$  at the foot of the wall, and to a point  $D$  in the rod. If  $CB$  is 5 inches and  $CD$  is perpendicular to  $AB$ , prove that the tension of the string is  $\frac{65W}{238}$  lbs.

9. A ball is fired with velocity  $V$  feet per second at an angle  $\alpha$  with the horizontal. Neglecting the resistance of the air, find the horizontal and vertical distances described in the first  $t$  seconds of its flight.

What is the velocity in magnitude and direction when the horizontal distance traversed is  $a$  feet?

10. Explain what is meant by the mechanical advantage of a machine.

Describe a system of pulleys with two blocks and a single string.

If the upper block has 5 pulleys and the lower 5, find the mechanical advantage if friction, the weight of the lower block and the weight of the string be neglected.

What force would lift a weight of 5 cwts., the weight of the lower block being 10 lbs. and the friction and weight of the string being equivalent to another weight of 1 lb.?

11. Distinguish *solid*, *liquid* and *gas*.

Distinguish between a perfect and a viscous liquid. Give reasons to show that water is viscous.

12. Explain the principle of the mercury barometer, stating clearly what it is used to measure.

The height of the mercury column of a barometer in a stationary balloon is  $H$ . If the balloon (i) rises with uniform acceleration  $a$ , (ii) falls with uniform acceleration  $a$ , find the height of the column in the two cases.

13. Define the specific gravity of a substance, and describe any method you know of finding the specific gravity, (i) of a solid, (ii) of a liquid.

A 56 lb. iron weight is held suspended in water by a string. If the specific gravity of the iron is 7.8, find the tension of the string when the weight is totally immersed and when only two-thirds of its volume is under water.

14. Describe a hydraulic press and explain its action.

In a hydraulic press a thrust of 15 lbs. is applied at the end of a lever 5 feet from the fulcrum actuating the plunger of the force pump which moves in a line one foot from the fulcrum; the plunger has a diameter of 1 inch and the ram a diameter of 8 inches; find the thrust in tons exerted by the ram.

15. What do you understand by the pressure at a point of a fluid? State Boyle's law.

A gunner slowly pushes an airtight sponge into the bore of a cannon. If the bore is 120 inches long and 5 inches in diameter, find how far he can push the sponge when the utmost force he can exert is 100 lbs. [The atmospheric pressure is 14.7 lbs. to the square inch.]

## II.—FOR DEGREE OF M.A.

## I. FOR ORDINARY DEGREE.

## A.—DEPARTMENT OF LANGUAGE AND LITERATURE.

## LATIN PROSE—TWO HOURS.

The frequent Labours I underwent every day made in a few weeks a very considerable change in my health: The more my Master got by me, the more unsatiable he grew. I had quite lost my Stomach, and was almost reduced to a Skeleton. The Farmer observed it, and concluding I soon must dye, resolved to make as good a hand of me as he could. While he was thus reasoning and resolving with himself, a *Stardral*, or Gentleman Usher came from Court, commanding my Master to carry me immediately thither for the Diversion of the Queen and her Ladies. Some of the latter had already been to see me, and reported strange things of my Beauty, Behaviour, and good Sense. Her Majesty and those who attended her were beyond Measure delighted with my Demeanor. I fell on my knees, and begged the honour of kissing her Imperial Foot; but this Gracious Princess held out her little Finger towards me (after I was set on a Table) which I embraced in both my Arms, and put the tip of it, with the utmost respect, to my Lip. She made me some general questions about my Countrey and my Travels, which I answer'd as distinctly and in as few words as I could.

SWIFT: *Voyage to Brobdingnag.*

## LATIN TRANSLATION—TWO HOURS.

Translate into English:

1. Horace, *Odes*, i. 11.
2. Horace, *Odes*, iv. 14, 1—24, or  
Propertius, iii. 13, 33—46.
3. Horace, *Satires*, ii. 3, 64—81.
4. Vergil, *Aeneid*, vii. 803—817.
5. Cicero, *Pro Cluentio*, 38, 105—106, or  
Cicero, *Pro Roscio Amerino*, 33, 93—94, or  
Cicero, *Pro Murena*, 9, 19—20.
6. Tacitus, *Annales*, 15, 36.

## LATIN GENERAL PAPER—TWO HOURS.

(Do questions 1, 2, 7, and two others.)

## 1. Translate:

Postero die advocatur concilium; ubi cum per praeconem, sicut Graecis mos est, suadendi, si quis vellet, potestas a magistratibus facta

esset, nec quisquam prodiret, diu silentium aliorum alios intuentium fuit. Neque mirum, si, quibus sua sponte volutantibus res inter se repugnantes obtorpuerant quodam modo animi, eos orationes quoque insuper turbaverant utrumque, quae difficilia essent, promendo, admonendoque per totum diem habitae. Tandem Aristaeus, praetor Achaeorum, ne tacitum concilium dimitteret, 'ubi' inquit 'illa certamina animorum, Achaei, sunt, quibus in convivii et circulis, cum de Philippo et Romanis mentio incidit, vix manibus temperatis? Nunc in concilio ad eam rem unam indicto, cum legatorum utrumque verba audieritis, cum referant magistratus, cum praeco ad suadendum vocet, obmutuistis! Si non cura salutis communis, ne studia quidem, quae in hanc aut in illam partem animos vestros inclinarunt, vocem cuiquam possunt exprimere? Cum praesertim nemo tam hebes sit, qui ignorare possit dicendi ac suadendi, quod quisque aut velit aut optimum putet, nunc occasionem esse, priusquam quicquam decernamus; ubi semel decretum erit, omnibus id, etiam quibus ante displicuerit, pro bono atque utili fore defendendum.'

LIVY, xxxii. 20.

2. (a) Parse: *extuderit, spargier, palpere*, and explain briefly *subsortitio*, *in litibus aestimandis*, *in aerarios referri*.

(b) Translate, with short notes on syntax:

(i) *Seriberis Vario fortis et hostium  
Victor Maeonii carminis alite.*

(ii) *Ne quis humasse velit Aiace, Atrida, vetas cur?*

(iii) *Regalesque accensa comas, accensa coronam.*

(iv) *Et capta quaedam castella, gloriaeque et praedae nonnihil partum, si aut gloriam cum modo, aut praedam cum cura habuisset.*

(c) Scan these lines, naming the metres:

(i) *Simul unctos Tiberinus humeros lavit in undis.*

(ii) *Aut leves ocreas lento ducunt argento.*

(iii) *Sic lucro aversam potuisse nasci.*

(iv) *Vos lene consilium et datis, et dato.*

3. What were the most important features in the conquest and organisation of Italy up to 241 B.C.?

4. What historical truth underlies the traditional account of the kings of Rome?

5. How did Cicero regard (a) Sulla, (b) Pompey?

6. Compare the position of Rome and Carthage in the first Punic War as regards government, military and naval organisation, and material resources.

7. "Non hoc iocosae conveniet lyrae." How far is Horace's implied description of his own work adequate?

or,

What is the position of the seventh Book in the general plan of the *Aeneid*?

## GREEK TRANSLATION—TWO HOURS.

Translate into English :

1. HOMER, *Iliad*, XXII. 136—156.
  2. EURIPIDES, *Andromache*, 274—293 and 1136—1149.
  3. DEM. *De Falsa Leg.* 183—186.
  4. AESCH. *De Falsa Leg.* c. 45.
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## GREEK PROSE AND GRAMMAR—TWO HOURS.

1. Turn into Greek :

Philip now convened a congress of Grecian cities at Corinth. He here announced that he was resolved upon an expedition against the Persian king, for the purpose of liberating the Greeks in Asia and of punishing the Persians for their attacks upon Greece. For this purpose he was appointed general of the united Greek forces by a vote of the congress, which also decreed that bodies of troops furnished by the several cities should join him. Though Sparta refused to take any part in these proceedings, Athenian deputies were present and concurred in the vote. Athens was required to provide a sufficient fleet to serve under Philip, and the islands which had formerly been dependent upon her were now enrolled under his supremacy: and thus, though she continued to possess a large and powerful fleet, the empire which she had struggled to acquire and to retain since the Persian wars, now finally disappeared.

2. Translate the following sentences, with notes on the syntax :

- (a) αἱ τε πόλεις πολλαὶ καὶ χαλεπαὶ λαβεῖν αἱ τῶν Φωκέων, μὴ οὐ χρόνῳ καὶ πολιορκίᾳ.
- (b) δῆλον ὅτι δεινὸν ἂν τι παθεῖν σαυτὸν ἤλπιζες, εἰ πύθονθ' οὔτοι τὰ πεπραγμένα σοι.
- (c) ᾧ ψήφισμα ἐπεδείξατο Δημοσθένους, καὶ ἀνεκοινοῦτο εἰ δὴ τῷ γραμματεῖ.
- (d) παρ' ὧν μὲν βοηθεῖς, οὐκ ἀπολήψει χάριν.
- (e) νῦν δ' ἂν πολλὰ πάθῃσι.
- (f) οὕτως ἔδειςας μὴ οὐ κακὴν δάμαρτ' ἔχῃς.
- (g) κομίζομένῃ νιν σοὶ κατοιμῶσαι γόοις.

3. Parse, with notes on the formation of the words, ἀρηικταμένῳ, ιταθείομαι, εἰκνῖα, τανηλεγέος, φιλήμεναι, εἵχετόωντο.

4. What constructions, and under what circumstances, follow verbs fearing in Greek ?

## GREEK GENERAL PAPER—TWO HOURS.

(Candidates should do (a) in section A, and two questions from each of sections B and C.)

## A.

## 1. Translate :

(a) ἀλλ' ὅτι μὲν τέχνη ἐστὶν ἡ παρασιτική, κακ τοῦτων καὶ τῶν ἄλλων ἱκανῶς δεδεικται. λοιπὸν ὅτι καὶ ἀρίστη δεικτέον, καὶ τοῦτο οὐχ ἀπλῶς, ἀλλὰ πρῶτον μὲν, ὅτι κοινῇ πασῶν διαφέρει τῶν τεχνῶν. εἴτα ὅτι καὶ ἰδίᾳ ἐκάστης. κοινῇ μὲν οὖν ἀπασῶν οὕτω διαφέρει· πάσης γὰρ τέχνης ἀνάγκη προσάγειν μάθησιν πόνον φόβον πληγὰς, ἅπερ οὐκ ἐστὶν ὅστις οὐκ ἂν ἀπεύξαιτο· ταύτην δὲ τὴν τέχνην, ὡς ἔοικε, μόνην ἐξεστι μαθεῖν ἄνευ πόνου. τίς γὰρ ἀπὸ δειπνῶν ποτὲ ἀπῆλθε κλαίων, ὥσπερ τινὰς ἐκ τῶν διδασκαλείων ὀρώμεν, τίς δ' ἐπὶ δειπνῶν ἀπιὼν ὥφθη σκινθρωπός, ὥσπερ οἱ εἰς τὰ διδασκαλεῖα φοιτῶντες; καὶ μὴν ὁ μὲν παράσιτος ἐκὼν αὐτὸς ἐπὶ δειπνῶν ἔρχεται μάλα ἐπιθυμῶν τῆς τέχνης, οἱ δὲ τὰς ἄλλας τέχνας μαθηάνοντες μισοῦσιν αὐτάς, ὥστε ἔνιοι δι' αὐτὰς ἀποδιδράσκουσι. τί δέ, οὐ κακέينو ἐννοῆσαι σε δεῖ, ὅτι καὶ τοὺς ἐν ἐκείναις ταῖς τέχνηαις προκόπτοντας οἱ πατέρες καὶ μητέρες τοῖτοις τιμῶσι μάλιστα, οἷς καθ' ἡμέραν καὶ τὸν παράσιτον; καλῶς νῆ Δι' ἔγραψεν ὁ παῖς, λέγων, δότε αὐτῷ φαγεῖν· οὐκ ἔγραψεν ὀρθῶς, μὴ δῶτε. οὕτω τὸ πρᾶγμα καὶ ἔντιμον καὶ ἐν τιμωρίᾳ μέγα φαίνεται.

LUCIAN, περὶ Παρασίτου, c. 13.

(b)

τὴν Ἀφροδίτην οὐχ ὁρᾷς ὅση θεός :  
 ἦν οὐδ' ἂν εἴποις, οὐδὲ μετρήσεις ἂν  
 ὅση πέφυκε κάφ' ὅσον διέρχεται.  
 αὕτη τρέφει σὲ καμὲ καὶ πάντας βροτοὺς.  
 τεκμήριον δὲ μὴ λόγῳ μόνον μάθης.  
 ἔργῳ δὲ δεῖξω τὸ σθένος τὸ τῆς θεοῦ.  
 ἐρᾷ μὲν ὁμβρον γαῖ', ὅταν ξηρὸν πέδον  
 ἄκαρπον αὐχμῷ νοτίδος ἐνδεῶς ἔχῃ.  
 ἐρᾷ δ' ὁ σεμνὸς οὐρανὸς πληροῦμενος  
 ὁμβρον πεσεῖν εἰς γαῖαν Ἀφροδίτης ὕπο.  
 ὅταν δὲ συμμιχθῇτον ἐς ταῦτόν δύο,  
 φύουσιν ἡμῖν πάντα καὶ τρέφουσ' ἅμα,  
 δι' ὧν βρότειον ζῇ τε καὶ θάλλει γένος.

EURIPIDES, *Frag.* 890.

## B.

2. Indicate any features of thought and language in the *Iliad* characteristic of primitive poetry. Illustrate specially from Bk. XXII.

3. Describe and illustrate by quotation or reference the character of Hermione or Menelaus in the *Andromache*.

4. Summarise the case made out by Demosthenes against Aeschines, and say how far you think the defence successful or the reverse.

## C.

5. νῦν δὲ Ἀθηναίους ἂν τις λέγων σωτήρας γενέσθαι τῆς Ἑλλάδος (i.e. in the Persian Wars) οὐκ ἂν ἀμαρτάνοι τὸ ἀληθές. Show by a short narrative of the events how far this is true.



6. What were the main reasons for the failure of Athens in the Peloponnesian War?

7. Wherein lay the strength and weakness of the Spartan constitution?

8. Give a short account of the history of the second Athenian league.

## ENGLISH LANGUAGE AND LITERATURE.

### THREE HOURS.

(Answer NINE questions, taking ONE from A, ONE from B, FOUR from C, and THREE from D.)

#### A. LITERARY THEORY.

1. Literature differs from science in that the latter addresses itself to "the insulated understanding." Discuss.

2. What is meant by *preciosity*? Is it possible for a good style to be other than precious?

3. State and discuss Mr. George Meredith's theory of comedy.

#### B. PHILOLOGY.

4. What do you understand by the statement that certain Latin words are cognate with English words? How would you endeavour to establish the relationship? Illustrate.

5. Compare the influence exerted on English by the Danish invasions and the Norman Conquest, and account for the difference.

6. Discuss the influence of printed literature on the forms of daily speech.

#### C.

7. Is it true to say that the Elizabethan drama arose directly out of the Miracle or Morality plays which preceded it?

8. Illustrate and comment on the use of the supernatural by Pre-Shakesperian playwrights.

9. Marlowe's personal temperament was at once his greatest poetic gift and the chief obstacle to his success in drama. Illustrate your remarks from *Dr. Faustus*.

10. *Paradise Lost* has been called an "artificial" epic. Explain and discuss this description.

11. Write a brief description of the Miltonic type of sonnet.

12. Discuss the literary ideals of the Age of Anne and connect them with the events of contemporary history.

13. How did Pope and Addison each portray himself?

14. How does Defoe's realism differ from Swift's in purpose and method?

15. Do you think Wordsworth really "the lost leader" of English poetry in his changed attitude towards France? Answer, if you can, with reference to the *Prelude*.

16. Shelley's poetry of man reveals him as "a beautiful but ineffectual angel beating in the void his luminous wings in vain." Discuss.

#### D.

17. Why does Hamlet delay to kill the King?

18. Show your acquaintance with Dryden's most favourable and Pope's most unfavourable portraits of individuals.

19. "Enobarbus is as good as a chorus. The whole situation of things in their successive stages can be read in his speeches." Discuss.

20. Write short notes on the following passages, naming the speakers in each case:

(a) "Hercules and his load too."

(b) "Examples gross as earth exhort me."

(c) "This lapwing runs away with the shell on his head."

(d) "His quails ever  
Beat mine, inhooped, at odds."

(e) "Think, and die."

21. Show how the imaginative scheme of each of Gulliver's Voyages lends itself to the purposes of satire.

22. Compare the Odes of Gray with those of Wordsworth and of Keats.

## FRENCH LANGUAGE AND LITERATURE.

### FIRST PAPER—THREE HOURS.

#### I. Translate into English:

Au surplus, il est toujours possible d'introduire à peu de frais l'art dans nos demeures. Trop de gens commettent l'erreur de croire que la beauté est inséparable du luxe; et, victimes de cette illusion, à dépit du luxe véritable ils recherchent le faux luxe, si contraire à la beauté. Ils oublient que l'art peut habiter le plus modeste logis, à condition d'abord que celui-ci soit propre. La propreté, a-t-on pu dire, est l'élégance du pauvre. Que les meubles soient en petit nombre et de peu de valeur, il n'importe, pourvu qu'ils soient placés dans un ordre harmonieux. Il suffira de quelques fleurs habilement disposées sur une table et de quelques jolies gravures accrochées aux murs, pour donner à la plus humble chambre un aspect aimable et charmant.

#### II. Composition française:

Traiter l'un des sujets suivants:

(a) Comment La Fontaine comprend-il la fable? A-t-il été original dans l'imitation de l'antiquité et de l'ancienne littérature française? Prendre des exemples précis.

(b) Quel est l'enseignement moral qui se dégage des Fables de La Fontaine?

(c) Quelle est la part de l'histoire dans les œuvres de Victor Hugo?

(d) Comment Victor Hugo a-t-il compris la nature? Le montrer par des exemples.

## SECOND PAPER—THREE HOURS.

### I. Translate into French:

Clive, and the boy sometimes with him, used to go daily to Grey Friars, where the Colonel still lay ill. After some days the fever which had attacked him left him; but left him so weak and enfeebled that he could only go from his bed to the chair by the fireside. The season was extremely bitter, the chamber which he inhabited was warm and spacious; it was considered unadvisable to move him until he had attained greater strength, and till warmer weather. Besides his customary attendant, he had two dear and watchful nurses, who were almost always with him—Ethel, and Madame de Florac, who had passed many a faithful year by an old man's bedside; who would have come, as to a work of religion, to any sick couch, much more to this one, where he lay for whose life she would once gladly have given her own.

II. Scan the following lines and comment as to the rhythm, rimes and *cæsuras*?

Un pauvre homme passait dans le givre et le vent,  
 Je cognai sur ma vitre; il s'arrêta devant  
 Ma porte, que j'ouvris d'une façon civile.  
 Les ânes revenaient du marché de la ville,  
 Portant les paysans accroupis sur leurs bâts.  
 C'était le vieux qui vit dans une niche au bas  
 De la montée, et rêve, attendant, solitaire,  
 Un rayon du ciel triste, un liard de la terre,  
 Tendant les mains pour l'homme et les joignant pour Dieu.

III. Historical Grammar.—Answer, in English, ONE of the following questions:

(a) Say what you know of the reform of the French language as desired by Malherbe:

Or (b) Explain what Vaugelas meant by the "théorie de l'usage."

## GERMAN LANGUAGE AND LITERATURE.

### FIRST PAPER—THREE HOURS.

#### I. Translate into German:

A thousand little things, not separately to be defined, conspire to form these graces, this *je ne sais quoi* that always pleases. A pretty person, a proper degree of dress, an harmonious voice, something open and cheerful in the countenance, but without laughing; a distinct and properly varied manner of speaking: all these things, and many others,

are necessary ingredients in the composition of the pleasing *je ne sais quoi*, which everybody feels, though nobody can describe. Observe carefully, then, what displeases or pleases you, in others, and be persuaded, that, in general, the same things will please or displease them, in you. Having mentioned laughing, I must particularly warn you against it; and I could heartily wish, that you may often be seen to smile, but never heard to laugh, while you live. Frequent and loud laughter is the characteristic of folly and ill manners: it is the manner in which the mob express their silly joy, at silly things; and they call it being merry.

2. Answer, in German, one of the following questions:

- (a) Give the contents of *Minna von Barnhelm*, or *Götz von Berlichingen*.  
 (b) What influence had the discovery of America upon Europe?

#### GRAMMAR.

(Answer SIX of the following questions.)

1. When is *ch* a back-guttural and when a palatal (front) sound? Give examples.

2. Describe the quality (open, close) and the quantity of the vowels in the following words: *schön, Mörder, Mütter, kühn, mit, hält, Bart, Pferd, Bach*.

3. Compare carefully the pronunciation in the following pairs of words: alt—old: Milch—milk: Hand—hand: Dank—thank.

4. How did the further spread of *Umlaut* by analogy affect the language?

5. What general consonantal changes have taken place since the Middle High German period?

6. When the first sound-shifting took place, what changes did the gutturals undergo?

7. Mention the different verbal forms which have imperative force.

8. What gender did the Greek and Latin neuter plurals become in German? Give examples.

9. What does the adverbial genitive express?

#### SECOND PAPER—THREE HOURS.

1. Translate into English:

- (a) Ich bin die Schwache, sie die Mächt'ge—Wohl!  
 Sie brauche die Gewalt, sie töte mich,  
 Sie bringe ihrer Sicherheit das Opfer.  
 Doch sie gestehe dann, dass sie die Macht  
 Allein, nicht die Gerechtigkeit genßt.  
 Nicht vom Gesetze borge sie das Schwert,  
 Sich der verhassten Feindin zu entladen,  
 Und kleide nicht in heiliges Gewand  
 Der rohen Stärke blutiges Erkühnen.  
 Solch Gaukelspiel betrüge nicht die Welt!

Ermorden lassen kann sie mich, nicht richten !  
 Sie geb' es auf, mit des Verbrechens Früchten  
 Den heil'gen Schein der Tugend zu vereinen,  
 Und was sie ist, das wage sie zu scheinen ! *Maria Stuart.*

(b) Ihn selbst hatte das schnelle Gelingen seiner Anstalten von neuem so zuversichtlich gemacht, dass er von keinem Frieden hören wollte. Östreich gab sich viele Mühe, ihn zu vermitteln, und wenn sein hochfahrender Sinn nur etwas hätte nachgeben wollen, so hätte er wenigstens noch alle Länder bis an den Rhein für Frankreich behalten können. Aber seinem Stolze dünkte es unertraglich, die Herrschaft der Welt aus den Händen zu geben. Er währte, sie immer noch behaupten zu können; denn die Gewalt des Gemütes, wenn es für Freiheit und Tugend entzündet ist, verstand er nicht zu berechnen. Darum erschien ihm die Begeisterung der Besseren in Deutschland wie ein leeres Haschen nach Luftgebilden, und der gewaltige Zorn des ganzen Volkes wie ein Fieberrauch, der bald verrauchen werde, wenn Gut und Blut zum Opfer gebracht werden sollten. So lange nur Kräfte gegen ihn stritten, welche er kannte, überwältigte er sie mit der kalten Überlegenheit seines Verstandes und der Übermacht seiner Heere; wie viele dabei zu Grunde gingen, war ihm gleichgültig.

KOHLRAUSCH.

(c) Zum Vermittler zwischen einem verdriesslichen, täglich mehr sich hypochondrisch qualenden Hausherrn und einem zwar wohlwollenden, aber sehr ersten und genauen Militärgast fand sich glücklicherweise ein behaglicher Dolmetscher, ein schöner, wohlbeleibter, heitrrer Mann, der Bürger von Frankfurt war und gut französisch sprach, sich in alles zu schicken wusste und mit mancherlei kleinen Unannehmlichkeiten nur seinen Spass trieb. Durch diesen hatte meine Mutter dem Grafen ihre Lage bei dem Gemütszustande ihres Gatten vorstellen lassen; er hatte die Sache so klüglich ausgemalt, das neue, noch nicht einmal ganz eingerichtete Haus, die natürliche Zurückgezogenheit des Besitzers, die Beschäftigung mit der Erziehung seiner Familie, und was sich alles sonst noch sagen liess, zu bedenken gegeben, so dass der Graf, der an seiner Stelle auf die höchste Gerechtigkeit, Unbestechlichkeit und ehrenvollen Wandel den grössten Stolz setzte, auch hier sich als Einquartierter musterhaft zu betragen vornahm und es wirklich die einigen Jahre seines Dableibens unter mancherlei Umständen unverbrüchlich gehalten hat.

*Dichtung und Wahrheit.*

(d) Gleich allen echten Germanen hegte Luther ein tiefes Gefühl historischer Pietät, und er liebte, die grosse Neuerung, die er in der Kirche vollzog, sich nur als die Wiederherstellung der ursprünglichen Zustände des Christentums zu denken. Dagegen wusste er wohl, dass er das politische Leben der Völker mit einem schlechthin neuen Gedanken befruchtet hatte. "So stund's aber dazumal" — sagt er über die Zeiten seiner Jugend — "es hatte niemand gelehret noch gehört, wusste auch niemand von der weltlichen Obrigkeit, woher sie käme, was ihr Amt oder Werk wäre, oder wie sie Gott dienen solle." In der Tat war der Staat noch niemals zu seinem vollen Rechte

gelangt seit die schwere, der heidnischen Welt unbekannte Frage nach den Grenzen geistlicher und weltlicher Gewalt zuerst in der Christenheit aufgeworfen wurde. In ihren ersten Jahrhunderten hielt sich die Kirche scheu von dem Staate zurück, weil er heidnisch war, und als sie dann im Römerreiche die Oberhand gewann, entstand nach und nach, eng verbunden mit der Verfassung und dem Dogma der Kirche, das politische System der kirchlichen Weltherrschaft.

TREITSCHKE.

- (e) Darum gib ich dem dichter ganz  
Ein kron von rotem golt  
Und dem singer ein grünen krauz.  
Darbei ir merken solt :  
Kem der singer auf todes bar,  
Sein kunst mit im al stirbet gar ;  
Wirt der dichter begraben,  
Sein kunst wirt erst erhaben  
Muntlich und in buchstaben  
Gar weit in mengen lant.

Hans Sachs.

2. Comment on, but do not translate : im Anfange Mais : die untere weitläufige Hausflur : er war höchlich froh : eine Anzahl Hirsche : noch bei unseren Zeiten zu sehen : mit den folgenden Stocken überzubauen : ob ihr Heer dieses Weges ziehe : sechzig Stücke Geschütz : ehemals : einige vornehme Gelehrten : beschädigte die neuen Möbeln, verderbte einige schatzbare Bücher : populäre Schriftsteller : wir horten Maximilianen : ohne viel Schiessens.

3. Explain the derivation of : Schultheiss : Kreuzer : Batzen : Pokal : abermals : stracks : elend : Messe : waffenkundige : Landwehr : Leichnam : angelentlich : allenthalben.

#### LITERATURE.

(Answer SEVEN of the following questions; THREE from group A, and FOUR from group B.)

##### A.

1. Describe the character and estimate the importance of the *Alexanderlied* and the *Rolandlied*.

2. The *Nibelungenlied* has been called the *Iliad* of the Germanic races. Examine this statement.

3. To what do you attribute the decay of romance in the fourteenth century? What species of literature arose in its place?

4. Estimate the value of Luther's influence upon German literature.

5. Draw a map of Germany and put in the names of the following places : Weimar, Jena, Wetzlar, Quedlinburg, Mohrungen, Leipzig, Erfurt, Marbach, Göttingen.

## B.

6. What is the title *Dichtung und Wahrheit* meant to convey? Give a *brief* sketch of the contents of the first four books of this work.

7. Comment on the statement that in the dramatic field *Minna von Barnhelm* repeated the victory of *Roszbach*. What influence was the play calculated to have on the political situation of the time?

8. To what period of Goethe's literary activity does *Tasso* belong? Discuss the connection of Goethe's *Tasso* to the *Tasso* of history.

9. What are the works of Goethe and Schiller which were inspired by the Sturm und Drang movement? Give the contents of one of them.

10. Give a short sketch of Schiller's life and work before he settled in Weimar.

11. What do you understand by the *Faust Fragment*?

## ITALIAN LANGUAGE AND LITERATURE.

## FIRST PAPER—THREE HOURS.

Translate into Italian :

## A.

1. I wandered lonely as a cloud  
That floats on high o'er vales and hills,  
When all at once I saw a crowd,  
A host of golden daffodils;  
Beside the lake, beneath the trees,  
Fluttering and dancing in the breeze.

Continuous as the stars that shine  
And twinkle on the milky way,  
They stretched in never-ending line  
Along the margin of a bay:  
Ten thousand saw I at a glance  
Tossing their heads in sprightly dance.

WORDSWORTH.

2. FAITH. Yes, I met with one Discontent, who would willingly have persuaded me to go back again with him; his reason was, for that the valley was altogether without honour. He told me moreover that there to go was the way to disobey all my friends, as Pride, Arrogancy, Self-conceit, Worldly-glory, with others who he knew, as he said, would be very much offended if I made such a fool of myself as to wade through this valley.

CHR. Well, and how did you answer him?

FAITH. I told him, that although all these that he named might claim kindred of me, and that rightly (for indeed they were my relations according to the flesh) yet since I became a pilgrim they have disowned me, as I also have rejected them; and therefore they were to me no more than if they had never been of my lineage.

BUNYAN.

Translate into English :

B.

1. O falce di luna calante  
Che brilli su l'acque deserte,  
O falce d'argento, qual mèsse di sogni  
Ondeggia al tuo mite chiarore quaggiù?  
  
Aneliti brevi di foglie,  
Di fiori selvaggi dal bosco  
Esalano al mare. Non canto, non grido,  
  
Non suono pel vasto silenzio va.  
Oppresso d'amor, di piacere  
Il popol dei vivi s'addorme:  
O falce d'argento, qual mèsse di sogni  
Ondeggia al tuo mite chiarore quaggiù?

D'ANNUNZIO.

2. *Ritratto d'una regina.*

La regina, più di qualsiasi altra persona da me conosciuta, aveva quel tanto di spirito che ci vuole per non sembrare insulsi a chi non ci conosce. Più irritabile che altiera, più altiera che dignitosa, più manierata che sincera, più scioperata che larga, più larga che avida, più avida che disinteressata, piena d'attaccamento più che di caldo affetto, di asprezza più che di fierezza, atta a ricordar le offese piuttosto che i benefici, non già ferma, ma ostinata, era soprattutto inetta.

*Ritratto di un principe del sangue.*

Dal coraggio in fuori, il duca aveva tutte le buone qualità d' un galantuomo: ma, ahimè! di quel che ci vuole per fare un grand' uomo tutto gli mancava. Così s' cacciò in tutti gli affari di stato perché non osava restarne fuori, e presto ne veniva fuori con infamia perché non osava guardare in viso le difficoltà.

RITRATTI DELLE COSE DI FRANCIA.—*Anon.*

## SECOND PAPER—THREE HOURS.

### I. GRAMMAR.

(Two questions only to be answered.)

- (a) Abbozzare una lezione su gli aggettivi, secondo la traccia seguente :
  1. Terminazioni d' ambo i generi e numeri.
  2. Bello, buono, santo, grande.
  3. Formazione dei gradi di comparazione e loro possibili irregolarità.
  4. Frasi comparative.
- (b) Abbozzare una lezione su la pronuncia :
  1. Suono del *c* e del *g* : come pure del *gl*, *gn*.
  2. Funzione dell' *h*.
  3. Doppio suono dell' *s* e dello *z*.
  4. Dittonghi contratti e dittonghi allungati.
  5. Sillabe grammaticali e sillabe fonetiche.
- (c) Coniugare i tempi irregolari di *potere*, *dovere*, *pascere*. Costruire due frasi ipotetiche.



## II. LITERATURE.

*(ONE question only to be answered.)*(a) *Sunto critico della Vita Nuova :*

1. Significato del libello.
2. Avvenimenti reali narrati in esso.
3. Data probabile.

(b) *Sunto ragionato dei primi 7 cieli del Paradiso.*(c) *L'Opera del Machiavelli.*

## CELTIC.

## FIRST PAPER—THREE HOURS.

1. Transliterate, extending the contractions in full, the passage marked from the Facsimile of *Leabhar na h-Uidhri*.

2. Translate :

*Líadain ben do Chorce Duibne .i. banéces. Luid si for cuairt hi crích Connacht. Cuirithir mac Doborchon, éces side dano. Do Chon-nachtaib dó. Dogníther ón cuirm di-si le Cuirithir.*

*‘Cid ná dénaim-ni éntad, a Líadain?’ ol Cuirithir. ‘Ropud an ar mac ar ndís.’*

*‘Ní dénaim-ni ón,’ ol sise, ‘ar na loiti mo chuairt immu. Dia tís ar mo chend dorísi dom thig, doreg-sae lat.*

*Ba fír son. Luid fodess 7 cengilla ‘na diaid 7 a etachsom hi téig for a muin-side 7 drochétach imme 7 cennae na ngái isin téig. Luid iarom co mbái icon topur i tóib ind lis. Gaibid iarum a étach corcordae imme 7 doratae na gái for a cronna, co mbói ic a crothud.*

3. Express in English :

*Dotháet Cuculainn iarsin, co tard a druim frisín liic ocus ba hóc a menma leis, ocus dofuit cotlud fair. Co n-accai in dá mnái eucái, indala n-ai brat úaine impe, alaili brat corera coiediabail im sude. Dolluid in ben cosin brot úane chucai ocus tibid fris ocus nodslaid fón alt cétna ocus bátar fri éiana móir oca sin, .i. cechtar dé immasch eucái beus dia bualad, co m-bo marb acht beg. Lotir úad iarom. Arigsitar Ulaid uli aní sin ocus asbertatár, ara n-duscide.’ ‘Acc,’ ol Fergus, ‘nachin glúasid, res atchi.’ Atracht iarom treua chotlud. ‘Cid dot rónad?’ ol Ulaid fris. Ní ro fet iarom a n-accallaim. ‘Nomberar’ for se,’ dom sergligu .i. don Teti Brice, na bá do Dún Imrith no do Dún Delea.’*

4. Give in modern Gaelic the following passage from the Book of Deir, and write brief notes upon the chief grammatical peculiarities :

*Columille 7 drostan mac cósgreg a dálda tangator abh marrsalseg dia dóib gonic abbastobóir 7 bede cruthnec robo mormaer búchan araginn 7 essé rothidnaig dóib ingathraig sain insaere gobraith o móрмаer 7 o thósec.*

*tangator asááthle sen incathraig ele 7 doráten ri columille si iarfallán dórath dé 7 dorodloeg arinmormaer .i. bede gondastabrad dó 7 nitharat.*

7 rogab mac dó galár iarnéire naglerec 7 robomarb act mádbec. iarsen dochúid in mormaer dattác neglerec gondéndaís ernacde lesinmac gondísad slánte dó 7 dórat inedbáirt doib úa cloic in tiprat gonice chloic pette meic garnáit. deronsat inneruacde 7 tanic slánte do, iarsen dorat columéille dó drostan inchadraig sen 7 rosbenact.

5. Translate literally into English :

- (1) Co cloisind torm na tond tana  
fors na caircei  
Co cloisind nuall ri taebh reilcei  
fuam na fairrge.
- (2) Sel ic buain duilisc do charraic  
sel ic acladh  
Sel ic tabairt bídh do bochtaib  
sel i cearcair.

6. Give some account of the life and work of Columcille.

*Alternative:* Indicate briefly a scheme of Old Gaelic declension according to stems, and decline three examples in full, pointing out the proto-Celtic forms.

## SECOND PAPER—THREE HOURS.

1. Translate :

Gu'm beannaicheadh Dia long Chlann Raonuill  
An ciad lá a chaidh air saile,  
E-fhéin 's a thréin-fhíor ga caitheamh,  
Tréin a chaidh thar mathas cháich.  
Gu'm beannaich an Coimhídhia naomh  
Junrais anail nan speur ;  
Gu'm sguabteadh garbhloch na mara  
Gu'r tarraing gu cala réidh.  
Athair a chruthaich an fhairge  
'S gach gaoth shéideas as gach áird  
Beannaich ar caol-bháire 's ar gaisgich  
Cum i fhéin 's a gaisreadh slán.  
A Mhic ! beannaich fhéin ar n-acair  
Ar siúil, ar beairtean. 's ar stiúir ;  
'S gach droinip tha'n crochadh ri 'crannaibh  
'S thoir gu cala sinn le d' iúil  
Beannaich ar rachdan 's ar slat  
Ar croinn 's ar taoda gu léir ;  
An stadh 's ar tarruing cum fallain  
'S na leig-sa 'n ar caraibh beud.

2. Point out the Indo-European cognates of any *six* words in the above passage. If there are any loan-words, indicate their source.

3. Translate :

A Cheòlraidh mhòr tha'n tàmh gu h-ard  
Seallaibh a mos ;  
Nach cluinn sibh 'ur daltan air làr  
Ag atach a chios ?

Na tugaibh dhomh saothair nì glagan 'sa chluais.  
 'S de thuigse bhios fàs  
 Mar chaoch-chnuasaich chruinn a nì fuaim  
 Gun eitein 'na làr  
 Gabhaidh sibh fein, ge h-àrd 'ur staid  
 Rì iobairtean beag';  
 Nochdaidh mise mo chomas ge lag,—  
 'S eucoir mur creid.  
 Tha speirid mo chomais cunhang na's leoir  
 Ge farsaing mo mhiann  
 Gu balla thogail air stéidh cho mór  
 'S clach shnaidhte d' am dhith.  
 Cainnt shnasta d' am dhith, ge stracte mo thoil,  
 Tha mi falamh de sgil;  
 'S nì gun susbaint ealain gun sgoil  
 Air *suibsec* mar mhill.  
 Gur h-aimhghèur mo pheann, 's neo-sgaiteach mo bhil,  
 Mo phaipeir is m' *inc* tha iad làn de chron  
 'S uireasbhuidh sin.

4. Give some account of Alasdair Mac Mhaighstir Alasdair, and illustrate with quotations from his works his relation to his own time.

5. Express in Modern Gaelic :

What I think impressed one most was the power of nature, not in her supreme, but in her quiet moments. All around us were the waters of the same Atlantic Ocean which, not far off, was raging and hurling itself with its wonted might, but here silently ebbing and clearing a pathway for us mere human things whom a single wave could destroy, and who yet sat there undisturbed confident in the reign of law. The expanse of land at our feet, the sobbing waters, the glittering pools, the rocks reaching out above the retreating tide, were glorified with a thousand hues. The islands of Grimisay and Rona to the east, and of Baleshare to the west, gleamed like jewels in the lap of earth, and away on the horizon the mighty sun, father of all this glory, was slowly sinking into the ocean, again obedient to the reign of law. There was no obtrusive sign of power, no immensity of effect, but only silence and the setting sun brooding upon a watery waste, while from the distance came the low ceaseless sea-sound which in these islands is about us night and day. It was the magic of law, the silent law of nature and of God.

6. Write short notes on the lives and works of any *three* of the following :

Duncan Ban Macintyre, Ewen MacIachlan, Rob Donn, Dugald Buchanan, William Ross, James Macpherson, Norman Macleod (Caraid Nan Gaidheal).

7. "Whatever the ethics of the Gael may have been in the more turbulent periods of his history, his proverb legacy is not lacking in a strong sense of right and wrong and a persistent enforcement of moral truths."

Illustrate this statement.

## HEBREW.

## FIRST PAPER.

## 1. Point and translate :

ויהי איש אחד מצרעה ממשפחת הדני ושמו  
 מנוח ואשתו עקרה ולא ילדה : וירא מלאך יהוה  
 אל האשה ויאמר אליה הנה נא את עקרה ולא  
 ילדת והרית וילדת בן : ועתה השמרי נא ואל  
 תשתי יין ושכר ואל תאכלי כל טמא : כי הנך  
 חרה וילדת בן ומורה לא יעלה על ראשו כי נזיר  
 אלהים יהוה הנער מן הבטן והוא יחל להושיע את  
 ישראל מיד פלשתים : ותבא האשה ותאמר לאישה  
 לאמר איש האלהים בא אלי ומראהו כמראה מלאך  
 האלהים נורא מאד ולא שאלתיהו אימזה הוא ואת  
 שמו לא הנך לי : ויאמר לי הנך חרה וילדת בן  
 ועתה אל תשתי יין ושכר ואל תאכלי כל טמא כי  
 נזיר אלהים יהיה הנער מן הבטן עד יום מותו : ויעתר  
 מנוח אל יהוה ויאמר כי אדוני איש האלהים אשר  
 שלחת יבואנא עוד אלינו ויורנו מה נעשה לנער  
 היולד : וישמע האלהים בקול מנוח ויבא מלאך  
 האלהים עוד אל האשה והיא יושבת בשדה ומנוח  
 אישה אין עמה :

## 2. Translate into idiomatic Hebrew :

- “Who could tell how much joy, and who could tell how much suffering, the human soul was capable of? The ladder of joy went upwards. On its first step was a little babe; on the next, a laughing child; on the next, a young man rejoicing in his strength; on the next, a mother with her baby in her arms; on the next, a strong man rejoicing in health of body and soundness of mind; and higher still, and yet more blessed, was the man whose iniquity was pardoned; and higher still, the man whom God had called, the man who had received the crown of life; and highest of all, the blessed dead who had died in the Lord. Who could tell how much the ladder went

beyond that, into the joy that was unspeakable? And who could tell how much suffering the human soul was capable of? The ladder of suffering went downwards—tears, sorrow, misery, remorse, despair, down to the depths, but, how far, no man could tell. Truly, men were fearfully and wonderfully made; and God preserved them.<sup>5</sup>

ROBERTSON OF IRVINE.

ladder	סֶלֶם	step	מַעְלָה	suffering	עָנִי, עָנִית, עָנִי
the crown of life	תְּהִי	remorse, despair	הֵיטָא		

3. Give a succinct account of the political history of the kingdom of the Ten Tribes from the accession of Ahab. Describe the social and religious condition of the kingdom during that period.

4. Describe the stages in the process through which the Massoretic text came into its present form.

## SECOND PAPER—THREE HOURS.

I. 1. Translate 2 Sam. xv. 19—29.

2. Parse שָׁרִיב (v. 19), רָשָׁב (v. 19), בֹּאֵד (v. 20), אֲנִיעֵךְ (v. 20) בָּרִיכִים (v. 23), רִיעֵךְ (v. 24), and מִתְמַהֲמָה (v. 28).

3. What is the syntax of חֶסֶד רֵאֲמֶת (in v. 20), of בָּרִיכִים (v. 23), of קֹלֶךְ (v. 23), and of אֲתָר (in v. 25)?

4. The LXX. rendering of כְּמִקְרֹמֶךְ (v. 19) is ἐκ τοῦ τόπου σου, and of חֶסֶד רֵאֲמֶת (v. 20) καὶ Κύριος ποιήσει μετὰ σοῦ ἔλεος καὶ ἀλήθειαν. What was the Hebrew text, and why should this reading be preferred?

5. In v. 23 for אֵל פָּנֵי דָרֶךְ אֵת הַמַּדְבָּר Lucian's recension has πρὸ προσώπου αὐτοῦ κατὰ τὴν ὁδὸν τῆς ἐλαίας τῆς ἐν τῇ ἐρήμῳ. Give the Hebrew of this.

6. Which is to be preferred, the Q're or the K'thivh in אֲנִיעֵךְ (v. 20), כִּי אֵם (in v. 21), and בַּעֲבֻרָתָ (v. 28), and why?

7. What explanations have been given of רִיעֵךְ (v. 24) and הִרְוֹאתָ אֶתָּה (v. 27)?

8. Name and classify the accents in v. 19.

II. 1. Translate Psalm x. 1—11.

2. Parse תַּעֲלִיִּם (v. 1), הִלֵּךְ (v. 3), יִהְיֶה (v. 5), צִירָרִיו (v. 5), יִפִּיה (v. 5), אֲמַנֵּט (v. 6), יִצְפֹּר (v. 8), and יִשָּׂה (v. 10).

3. What is the syntax of יִדְבֹק and יִחַפְּשֵׁי (v. 2), of בָּצַע (v. 3), יִדְרֹשׁ (v. 4), מִזְרוֹם (v. 5), אֲשֶׁר (v. 6), and רִנֵּפֶל (v. 10)?

4. Remark on כְּהִלְכָּה (v. 8) and הִלְכָּאִים (v. 10).

5. Point the K'thib רדבה (v. 10), and translate the clause accordingly. What is the subject in the first half of the verse?

6. How do you account for  $\beta\epsilon\beta\gamma\lambda\omicron\upsilon\eta\tau\alpha\iota$  as a rendering of יהילר (v. 5)?

III. 1. Translate Job vi. 1—13.

2. Parse לעי (v. 3), יערבני (v. 4), הינהק (v. 5), מאנה (v. 7), לנגיע (v. 7), יתן (v. 8), ויאל (v. 9), יתר (v. 9), and איחל (v. 11).

3. What is the syntax of ישאר (v. 2), יכבד (v. 3), רדחי (v. 4), תבוא (v. 8), ויאל (v. 9), רדחי (v. 10), and יהמיר (v. 10)?

4. Remark on שקול (v. 2), יערבני (v. 4), שאלתי (v. 8), and היתי (v. 2).

5. Give an exegetical note on v. 13.

6. Give a brief account of the purpose, plan, and contents of the book of Job

## B.—DEPARTMENT OF MENTAL PHILOSOPHY.

### LOGIC.—THREE HOURS.

(Not more than TEN questions to be attempted. Two questions to be taken from EACH of the Sections A, B, and C.)

#### SECTION A.

1. What is the practical value of the study of Logic? Discuss the case of the man who has not studied Logic and yet reasons correctly.

2. What is the exact meaning of "some" in a logical judgment? Express the following sentences in logical form, and give the obverse and contradictory of each:

- (i) When a man aims blindly, he sometimes hits the mark.
- (ii) Few men get all they want.
- (iii) No Scotsmen need apply.
- (iv) Many a flower is born to blush unseen.
- (v) A few sailors were saved.
- (vi) Men alone can be Members of Parliament.

3. (a) State and explain the laws of the syllogism.

Does the following involve a breach of syllogistic law:

Whatever is not metallic is not capable of magnetic influence.  
Carbon is not metallic.

$\therefore$  Carbon is not capable of magnetic influence.

(b) Why can no inference be made from two particular premises?

4. Discuss the relation of truth and consistency.

5. "Induction *per enumerationem simplicem* not only is not necessarily an illicit logical process, but is in reality the only kind of induction possible."

Discuss, with reference to this view of Mill, the nature and ground of induction.

6. State and illustrate the Method of Agreement as an experimental method. What is its defect, and how is it overcome?

#### SECTION B.

7. Indicate the nature and value of the *continuum* theory of consciousness.

8. "We may compare the sensation, the element of the idea, to the elements treated of in chemical science." How far is the comparison valid?

9. "When I think of myself, the 'I' and the 'myself' are never quite identical."

What bearing has this (a) on introspection as a psychological method, and (b) on the nature of personality?

10. State the different views held as to the relation of mind and brain.

11. What is meant by the localisation of mental functions? Give illustrations, and show the bearing of mental pathology on the subject.

12. "In bare, naked perception, the mind is for the most part only passive" (LOCKE).

Explain and examine this statement.

#### SECTION C.

13. Explain the distinction made by Locke between primary and secondary qualities. How did Berkeley regard the distinction?

14. What did Locke mean by "the idea of a thing"? Give Berkeley's view of "things," and show its connection with Locke's view.

15. "Whatever seems true to a man is true for him and only for him." Is this a fair conclusion from Berkeley's philosophy?

16. Discuss Berkeley's view that the soul is "naturally immortal."

17. State Berkeley's doctrine of Nature. Is it consistent with his view that the finite mind is essentially active?

18. Give Descartes's arguments for the existence of God, and show their connection with his philosophy as a whole. What is your opinion of their worth?

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### MORAL PHILOSOPHY.—THREE HOURS.

All candidates for the Degree are required to answer not less than TWO nor more than THREE questions in Section A, and not less than SIX nor more than SEVEN in Section B.

#### SECTION A.

1. "The State is the individual writ large." Comment upon this statement, and indicate how Plato uses the analogy in defining Justice.

2. How does Plato explain the transition from Democracy to Tyranny? Sketch the tyrant's character.

3. What is the nature of the quarrel between poetry and philosophy as set forth in the Tenth Book of the *Republic*? What different views of Art are maintained by Plato in the *Republic*?

4. State and examine Plato's view of Private Property? Would Private Property have a place in an ideal State?

5. In what ways is the later scheme of Education distinguished from the earlier in Plato's *Republic*?

#### SECTION B.

1. What are the characteristics of the ordinary moral consciousness? What are the uses of reflexion in morals?

2. How has moral theory been affected by sensuous metaphor?

3. Examine the Antithesis of Tradition and Reason.

4. "The substance of the individual life is social." Explain and examine this statement.

5. Examine the view that our knowledge of self has priority over our knowledge of the world; and indicate the bearing of this view upon personal freedom.

6. What are the distinctive characteristics of a good which is moral?

7. In what sense, if any, is the Infinite knowable? Is "Anthropomorphism" in religion necessarily a defect?

8. "If the relation between man and the world be that of effect to cause he cannot be free; if it be that of organ to organism he may be free." Explain and discuss this view.

9. What had Socrates in common with the Sophists, and in what way did he differ from them?

10. What are the main defects of the ethical doctrine of the Stoics?

11. (1) Duty is self-consistency; (2) Duty is consistency with the Self; (3) Duty is consistency with Society. Compare these three views of Duty.

12. What is the value of Mill's modifications of Bentham's moral theory?

### POLITICAL ECONOMY.—THREE HOURS.

(Only EIGHT questions are to be attempted; FOUR from each section.)

#### I.

1. Trace the main stages in the Industrial Revolution or in the development of the Scottish Poor Law.

2. "Profits enter into (cost) price; rent does not." Explain.

3. "Demand is the tap root of value." How do you reconcile this with the fact that prices on the whole are determined by cost of production?



4. "A municipal corporation ought to be a model employer." Attack or defend this on purely economic grounds.

5. "The best union is a union of employers and employed." Discuss.

6. A woman working at home sewing buttons on cards earns, say 6s. a week. A joiner gets 10d. an hour. On what economic principle may the statement be defended that each is being "paid according to his (or her) worth"?

## II.

7. "Imports pay for exports." State the theory and interpret the fact that statistical returns show that, over the field of the world, there is always an excess of imports.

8. What part is played by money in economic life? Define carefully its functions, and show how these are realized by our own currency.

9. Is the creation of paper money equivalent to the creation of wealth?

10. "A rise in the rate of discount creates an artificial scarcity of money . . . but the ultimate effect is beneficial." Explain.

11. Are any arguments for protection valid for France or the United States which are not equally valid for this country?

12. What are the disadvantages of a monometallic system? Give some account of schemes to overcome these.

## EDUCATION.

### FIRST PAPER—THREE HOURS.

(Only SIX questions are to be answered—THREE from EACH section. The Examiners may reject any candidate showing conspicuous weakness in EITHER section).

#### A.

1. State definitely the function of 'music' in the curriculum of the *Republic*. Contrast the views of Plato with those of Spencer.

2. State the principles on which Plato would select literary material for the training of the young: and, accepting these principles, indicate the nature of the literary training which you would prescribe for a British school-boy.

3. "The life of the intellect will be the best for man, since the intellect is, above all, the man's self." State the arguments on which Aristotle bases this statement.

4. What, according to Aristotle, constituted a liberal education? To what extent may the curriculum of our Scotch schools be considered Aristotelian in (a) scope, (b) spirit?

#### B.

5. State the views of Spencer regarding the systematic culture of the powers of observation, and contrast with the teaching of Herbart.

6. What do you understand by 'making education a process of self-evolution'? State the advantages that Spencer claims for this general principle. How far is he in accord with Herbart?

7. Describe and comment upon Rousseau's method of teaching Geography. Show how you would apply the principles underlying his method to the teaching of other school-subjects.

8. "Unless words alone can convey a science there is no study adapted to children." State and criticise the arguments by which Rousseau has arrived at this conclusion.

## SECOND PAPER.—THREE HOURS.

(Only SIX questions to be attempted, ONE of which MUST BE question 8. The Examiners may reject any candidate showing conspicuous weakness in EITHER Section).

### A

1. What similarity exists between the educational problems of the Renaissance and those of the Sophist period of Greek education?

2. What basis does Rousseau offer for the doctrine of self-activity emphasised by Froebel?

3. To what extent is the constructive work of the school based upon Herbartian principles, and how far is this justified?

4. Indicate the place and value of the Inductive Method. To what extent was it used by Comenius?

### B.

5. To what extent are we justified in regarding automatism as the end of education? Illustrate your answer.

6. "The brain at any time is in a condition of preparedness for one rather than for another collection of interrelated and interwoven functions." Critically examine this statement, with especial reference to its educational significance.

7. "There can be no such thing as bodily training apart from mental training." What line of argument is taken by Plato in support of this theory, and how far is the theory being recognised in present-day curricula?

8. Write brief notes on the following:

(a) The psychological basis of Imitation.

(b) The two main classes of Interests according to Herbart.

(c) The Scotch Education Act of 1696.

(d) "On the whole the Socratic method has probably done more harm than good in our teaching."

(e) "Concentrated attention through effort is like a serial story, not continuous but continued."

## C.—DEPARTMENT OF SCIENCE.

## MATHEMATICS.

## FIRST PAPER.—THREE HOURS.

(NOTE.—Candidates may obtain full marks by doing correctly about TWO-THIRDS of this paper.)

(Either analytical or geometrical methods may be used in Questions 9, 12, 13.)

1. Shew how to describe a circle to touch one side of a triangle and the other two produced.

$I$  is the centre of the circle inscribed in the triangle  $ABC$ ; prove that the circum-centre of the triangle  $IBC$  lies on the circumference of the circum-circle of  $ABC$ .

2. Prove that equiangular triangles are similar.

$ABC, ADE, AFG$  are equilateral triangles described on like sides of their bases  $AB, AD, AF$  whose extremities  $B, D, F$  are collinear. Prove that  $C, E, G$  are collinear.

3. If a quadrilateral is inscribed in a circle, prove that the sum of the rectangles contained by the opposite sides is equal to the rectangle contained by the diagonals.

$P$  is a point in the plane of the equilateral triangle  $ABC$  such that  $PB = PA + PC$ ; prove that the four points  $A, B, C, P$  are concyclic.

4. Prove that the feet of the perpendiculars let fall from any point on a circle to the sides of an inscribed triangle are collinear.

$ABC$  is a triangle inscribed in a circle,  $P$  is the middle point of the arc below the base  $BC$ , and  $PM, PN$  are the perpendiculars let fall from  $P$  to the sides  $AB, AC$ . Prove that the straight line  $MN$  bisects the base.

5. Show that certain general relations hold among the trigonometric ratios of  $\theta, -\theta, \theta + \frac{\pi}{2}$ , where  $\theta$  is any angle.

Prove that  $\sin(\theta + \phi) = \sin \theta \cos \phi + \cos \theta \sin \phi$ ,

for all real values of  $\theta$  and  $\phi$ . Deduce the corresponding formula for  $\cos(\theta - \phi)$ , and prove that

$$\cos \theta - \cos \phi = 2 \sin \frac{\theta + \phi}{2} \sin \frac{\phi - \theta}{2}.$$

6. If  $(x_1, y_1)$  and  $(x_2, y_2)$  denote coordinates with respect to given rectangular axes (origin  $O$ ) of two given points  $P_1$  and  $P_2$ , prove that the measure of  $\triangle OP_1P_2$  is

$$\frac{1}{2}(x_1y_2 - x_2y_1),$$

and explain the significance of the *sign*.

Deduce the theorem that

$$\triangle P_1P_2P_3 = \triangle OP_1P_2 + \triangle OP_2P_3 + \triangle OP_3P_1,$$

where  $P_1, P_2, P_3$  are any three points of the plane.

7. Prove that if  $A, B, P, Q$  are any four coplanar points and  $M$  the middle point of  $AB$ ,

$$\triangle PAQ + \triangle PBQ = 2\triangle PMQ.$$

$ABCD$  is a parallelogram,  $O$  any point of its plane; prove that

$$\triangle OAB + \triangle OAD = \triangle OAC.$$

8. Concurrent straight lines through the vertices of a triangle  $ABC$  meet the opposite sides in  $D, E, F$ ; prove that the product of the position-ratios

$$BD : CD, CE : AE, AF : BF \text{ is } -1.$$

Given  $A, C, D$  on a straight line, establish a construction for the harmonic conjugate  $B$  of  $A$  with respect to  $C$  and  $D$ . Examine particularly the cases in which (i)  $A$  is the middle point of  $CD$ , (ii)  $A$  coincides with  $D$ .

9.  $O(ABCD)$  is a pencil of four concurrent lines.  $ABCD$  and  $PQRS$  are transversals of the pencil and  $A, B, C, D$  form a harmonic range; prove that  $P, Q, R, S$  form a harmonic range.

$A, B; C, D; E, F$  are three pairs of collinear points, and each combination of two pairs forms a harmonic range; if  $L, M, N$  are the middle points of  $AB, CD, EF$  respectively and  $O$  any point of the line, prove that

$$OA \cdot OB + OC \cdot OD + OE \cdot OF = OM \cdot ON + ON \cdot OL + OL \cdot OM.$$

10. Prove, from first principles, that an algebraic equation of the first degree in  $x, y$  represents a straight line.

Find the equations of the straight lines joining the points  $(1, -2)$  and  $(2, 1)$  to the point  $(3, -1)$ , and prove that they cut at right angles.

11. Prove that the equation of the tangent to the circle

$$x^2 + y^2 = a^2,$$

through the point  $(x_1, y_1)$  on the circumference is

$$xx_1 + yy_1 = a^2.$$

The straight line  $2x - 3y = 1$  cuts the circle  $x^2 + y^2 = 2$  at the points  $P, Q$ . Tangents to the circle at  $P, Q$  meet in the point  $T$ . Find the coordinates of  $T$  and verify by a careful diagram.

12. Define the *radical axis* of two circles, and state and prove its fundamental property.

A variable point moves so that the ratio of the tangents drawn from it to two fixed circles is constant; prove that the locus of the point is, in general, a circle coaxial with the given pair. What is the exceptional case?

13. If the polar of a point  $A$  with respect to a given circle pass through the point  $B$ , prove that the polar of the point  $B$  with respect to the circle passes through  $A$ .

Find the locus of a variable point whose polars with respect to two given circles are parallel lines.

SECOND PAPER—THREE HOURS.

(NOTE.—Candidates may obtain full marks by doing correctly about TWO-THIRDS of this paper.)

1. Establish the following identities :

$$(i) \quad \frac{a^6+1}{a^4-a^2+1} - \frac{a^6-1}{a^4+a^2+1} \equiv 2,$$

$$(ii) \quad x(x+1)^4 + (x-1)^2(x+3)^2 + 8(x+1)^2 - 16 \equiv (x+1)^5.$$

2. If  $f(x)$ , a polynomial in  $x$ , vanishes when  $x=a$ , prove that  $x-a$  is a factor of  $f(x)$ .

Find, by trial, one factor of  $x^3 - 4x^2 + 5x - 2$ , and deduce the others.

3. If  $\alpha, \beta$  are the roots of the quadratic equation  $x^2 + px + q = 0$ , prove that  $\alpha + \beta = -p$  and  $\alpha\beta = q$ .

If the roots of the quadratics

$$x^2 + px + q = 0, \quad x^2 + p'x + q' = 0$$

are in proportion, prove that  $p^2q' = p'^2q$ . Is the converse true? (The equations have no zero roots.)

4. Show that when  $a$  is made very small in comparison with the other coefficients, one root of the quadratic equation  $ax^2 + 2bx + c = 0$  becomes numerically very great.

Illustrate the theory of quadratic equations by discussing the variation of  $\frac{x^2-x+1}{x^2+x+1}$ , and sketch the graph of this function on squared paper.

5. Solve the following systems of equations :

$$(i) \quad \begin{aligned} x + 2y + 3z &= 0, \\ 3x + y + 2z &= 0, \\ yz + zx + xy + 33 &= 0. \end{aligned}$$

$$(ii) \quad \begin{aligned} x + y &= 3, \\ x^3 + y^3 &= 9. \end{aligned}$$

6. Find a closed expression for the sum of  $n$  terms of the series

$$1^2 + 2^2 + 3^2 + \dots$$

Prove that the difference between

$$2^2 + 4^2 + 6^2 + \dots + (2n)^2$$

and

$$1^2 + 3^2 + 5^2 + \dots + (2n-1)^2$$

is  $n(2n+1)$ .

7. Find the number of different  $n$ -permutations of  $n$  letters, one of which occurs  $p$  times, another  $q$  times, and the rest only once.

In how many ways can four letters be chosen from the word *elevate*?

8. Prove the Binomial Theorem for a positive integral exponent, and state the theorem for the other cases.

In the expansion of  $(a+b+c)^5$  prove that the coefficient of  $a^3bc$  is twice the coefficient of  $a^2b^2$ .

9. Establish the formulae

$$(i) \cos(\pi - \theta) = -\cos \theta,$$

$$(ii) \cos A = (b^2 + c^2 - a^2)/2bc.$$

$ABCD$  is a quadrilateral having  $AB=10'$ ,  $BC=3$ ,  $CD=12'$ ,  $DA=14'$ ,  $AC=12'$ . Prove that  $ABCD$  can be inscribed in a circle.

10. Prove that in any triangle

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2R.$$

If  $A+B+C=180^\circ$ , prove that

$$\sin^2 A + \sin^2 B - \sin^2 C = 2 \sin A \sin B \cos C.$$

11. Prove that the area of a triangle is given by the expression  $\sqrt{s(s-a)(s-b)(s-c)}$ , and find expressions in terms of the sides for the lengths of the perpendiculars of the triangle.

Calculate the area of the quadrilateral in question 9.

12. If  $\theta$  is the number of radians in an acute angle, prove that

$$\theta > \sin \theta > \theta - \frac{\theta^3}{4}.$$

Find expressions for the areas of regular  $n$ -gons inscribed in and circumscribed about a circle of radius  $R$ , and deduce the formula for the area of a circle.

13. Establish the formula

$$\tan \frac{A}{2} = \sqrt{\frac{(s-b)(s-c)}{s(s-a)}}.$$

Find the angles of the triangle whose sides are 11, 12, 13 units in length.

## NATURAL PHILOSOPHY.

### FIRST PAPER—THREE HOURS.

*(Candidates are requested not to attempt more than EIGHT of the following questions.)*

1. What data are required to completely specify a velocity and an acceleration?

Two particles  $a$  and  $b$  move with the same speed  $u$  along the sides  $BC$ ,  $CA$  of an equilateral triangle  $ABC$ . Find the velocity of  $b$  relatively to  $a$ .

Show that if  $a$  passes the middle point of  $BC$  when  $b$  leaves  $C$ , the least distance between  $a$  and  $b$  is  $\frac{1}{2}AB$ .

2. Describe graphical methods of exhibiting the acceleration of a body which moves (1) on a straight line, (2) on a curve.

A particle moving uniformly on a circle of radius  $a$  describes in a time  $t$  an arc subtending an angle  $\theta$  at the centre. Show that the velocity acquired in the time  $t$  is

$$\frac{2a\theta}{t} \sin \frac{\theta}{2}.$$

3. A fine thread  $AB$  of length  $l$ , from which a mass  $m$  is suspended hangs from its upper end  $A$ . Calculate the speed with which its lower end  $B$  must move in order that it may describe a horizontal circle of radius  $l \sin \alpha$ , and find the stretching force in the string during the motion.

Show that if the thread of a conical pendulum is elastic and its length proportional to the stretching force, the period of the motion is independent of the inclination of the thread to the vertical.

4. How can the laws of motion be illustrated on Atwood's machine?

If the thread connecting the masses breaks, how would you expect the masses to move afterwards?

Show that if the suspended masses are  $m_1, m_2$ , the resultant force which they exert on the pulley is

$$\frac{4m_1 m_2 g}{m_1 + m_2}.$$

5. From the velocity and acceleration of a point which describes a circle of radius  $r$  uniformly in a time  $T$ , deduce the velocity and acceleration of a point which performs simple harmonic vibrations of amplitude  $r$  and period  $T$ .

A mass of 0.5 gram is attached to one prong of a fixed vertical fork which performs 256 vibrations per second. If the amplitude of vibration is 0.2 cm., find the greatest force exerted on the mass.

6. Define the Watt and the Horse-power.

A man weighing 150 lbs. rides a bicycle weighing 30 lbs. up an incline of 1 in 36 at a speed of 9 miles an hour. Calculate in H.P. the power spent in overcoming gravity.

7. State the laws of friction, and define the coefficient of friction. Determine in lbs. weight the force that will raise the speed of a train weighing 200 tons to 30 miles an hour in a distance of 660 yards from rest on a level line, the resistances due to friction, etc., being 15 lbs. weight per ton moved.

8. State the law of gravitation. Describe experiments which show that at a given place, the weights of different bodies are proportional to their masses.

What would be the period (to the nearest minute) of a satellite revolving round the earth, just outside its surface, in the plane of the equator?

Assume the radius of the earth = 4000 miles ;

$$g = 32 \text{ ft./sec}^2.$$

9. Explain how to calculate the kinetic energy (1) of a hoop, (2) of a plate, revolving in its own plane about an axis through the centre.

A thin hoop rolls down a rough inclined plane. Show that in descending a vertical distance  $h$  from rest, its centre acquires a velocity  $\sqrt{gh}$ .

10. What distinguishes a fluid from a solid body?

A fine thread passes over a pulley which can rotate on smooth bearings. From one end of the thread a mass  $m$  is suspended in air, from the other a mass  $M$  hangs immersed in liquid. Apply the

principle of work (by considering a vertical displacement of  $M$ ) to show that when there is equilibrium the mass of liquid displaced by  $M$  is  $M - m$ . [Do not assume Archimedes' Principle.]

11. Explain the construction and mode of action of the ordinary pump for raising water.

If the diameter of the barrel is 4 inches, the length of the piston stroke 8 inches, the diameter of the pipe 1 inch, and the lower valve is 16 feet above the water surface, find how high the water rises in the first stroke, taking the height of the water barometer as 30 feet.

12. Define elasticity of shape and elasticity of bulk, explaining how they are measured.

Show that at constant temperature the bulk-elasticity of a gas is measured by its pressure.

If the elasticity of a gas when no heat escapes or enters is  $\frac{2}{3}$  of its pressure, find the reduction of volume if the pressure of a quantity of gas which initially occupies 1000 c.c. is suddenly increased from 75 to 76 cm. of mercury.

13. Define Young's Modulus. Show (preferably by a graphical method) that the work done in increasing the length of a wire by  $l$  is  $\frac{1}{2}Fl$ , the stretching force being slowly increased from zero to the final value  $F$ .

Show that the work required to slowly produce a further increase of length  $l'$  is  $\frac{F}{2l}(l'^2 + 2ll')$ .

## SECOND PAPER—THREE HOURS.

(NOTE.—Candidates are requested not to attempt more than EIGHT of the following questions.)

1. Show how the dilatometer method can be applied to determine the coefficient of expansion of a specimen of a solid body.

If  $f_1, f_2$  be the fractions of the whole space in a dilatometer occupied by the specimen and the liquid at the lower temperature,  $K_1, K_2$  their coefficients of expansion,  $N$  the number of graduation spaces contained in this whole space,  $n$  the number measuring the apparent expansion, and  $t$  the rise of temperature, prove that

$$K_1 = \frac{1}{f_1 t} \left\{ \left( 1 + \frac{n}{N} \right) (1 + \gamma t) - (f_1 + f_2 + f_2 K_2 t) \right\},$$

where  $\gamma$  is the coefficient of expansion of the containing vessel.

2. Define critical temperature, critical pressure, and critical volume for a substance. Describe Andrew's experiments, giving a careful description of his apparatus.

3. What is meant by Regnault's "Total Heat of Steam?" How did he determine it? Denoting it by  $Q_t$  we have approximately

$$Q_t = 606.5 + .305t.$$

Hence calculate the latent heat of steam at  $0^\circ \text{C.}$ ,  $50^\circ \text{C.}$ ,  $100^\circ \text{C.}$  and  $200^\circ \text{C.}$



4. Define emissivity of a surface for heat. State Newton's law of cooling. A blackened copper globe at  $100^{\circ}\text{C}$ . hung in air at  $0^{\circ}\text{C}$ . cools to  $97^{\circ}\text{C}$ . in half a minute; how long will it take to cool to  $40^{\circ}\text{C}$ .?

How is it proved that the emissivity of a surface at any temperature is equal to its absorptivity at the same temperature?

5. Describe briefly the emissive and undulatory theories of light. How is the phenomenon of refraction explained by means of the emission theory? Hence show that this theory is untenable.

6. Give an account of the analysis of light by the prism; describe carefully the arrangement of apparatus for producing a spectrum.

Describe clearly how to obtain a pure spectrum, that is a spectrum in which there is practically no overlapping and mixing of the colours.

7. Explain, with the aid of sketches, the action of (1) a simple magnifying glass, (2) an ordinary telescope.

How can the magnifying power of a telescope be determined?

8. Define frequency of a musical note and explain how that of the note sounded by a given fork can be experimentally determined.

Describe and explain the effects of a rise of the temperature of a room on the pitch of wind instruments and stringed instruments in the room; for example, an organ and a piano.

Taking the expansion of air per  $1^{\circ}\text{C}$ . rise of temperature under constant pressure as  $\frac{1}{273}$  of the volume at  $0^{\circ}\text{C}$ ., find the rise above  $0^{\circ}\text{C}$ . which will alter the general pitch of an organ half a semitone. (The ratio of the frequency of a note to that of a note a whole semitone higher is  $1\frac{1}{2}$ .)

9. Taking the velocity of sound as 1140 feet per second, find the smallest length of an organ pipe open at one end which would resound to a fork of frequency 256. Explain the resonance here referred to.

Show how by means of a resonance tube the velocity of sound can be determined.

10. Two very small equal spherical conductors have electrostatic charges of 24 and 40 units respectively. Find the force between them when they are 5 cms. apart. They are now put in contact; find the force between them when they are again separated by 5 cms. Consider in both cases (1) similar and (2) dissimilar charges.

11.  $P$ ,  $Q$  are two points in the field of a point-charge of electricity situated at  $A$ . Prove by any process that the work done against electrical forces in carrying a unit charge from  $Q$  to  $P$  is  $\frac{q}{AP} - \frac{q}{AQ}$  and is independent of the path pursued in the transference. Hence show that no gain of energy can be obtained by carrying a unit charge round a closed path in the field.

Deduce, stating any assumptions made, that the work done in charging a spherical conductor of radius  $r$ , and with a charge  $Q$  of electricity, is  $\frac{1}{2} \frac{Q^2}{r}$ , if the sphere is at a great distance from all other conductors.

12. Define specific inductive capacity. Describe Faraday's experiments for comparing the specific inductive capacities of insulators.

A condenser is composed of two disks, each of radius 15 centimetres, placed at a distance apart of 3 centimetres. Calculate its capacity. Supposing that a plate of material, 1 cm. thick and of specific inductive capacity 2.5, were placed symmetrically between the plates, what would be the value of the capacity?

13. Define magnetic declination and magnetic dip.

How would you determine the horizontal component of the earth's magnetic field intensity for a particular place?

14. State Ohm's law for a homogeneous conductor, and apply the law to the case of a circuit consisting of a homogeneous conductor and a voltaic cell.

A cell whose electromotive force is 1.5 volts and internal resistance 2 ohms has its terminals joined by two wires of resistance 4 ohms and 6 ohms in parallel. Find the current flowing in each of the wires.

15. Give some account of the phenomena of the induction of electric currents, and by means of the ideal rails and sliding bar magneto-electric machine define the c.g.s. unit, and also practical unit, of electromotive force.

A copper disk of radius  $a$  is spinning about a horizontal axis lying in the magnetic meridian. Show that the difference of potential between the centre and circumference is  $\frac{AH}{T}$ , where  $A$  is the area of the disk,  $T$  its periodic time, and  $H$  the intensity of the earth's field.

Work out for the case of a disk 15 cms. in radius and making 700 revolutions per second. Take  $H$  as .16 c.g.s. Express the difference of potential in volts.

### SPECIAL GRADUATING COURSE—THREE HOURS.

(NOTE.—Do not attempt more than EIGHT of the following questions. Choose at least THREE from part I.

N.B.—Candidates were required to attend in the Natural Philosophy Department at 2 p.m. on Saturday, April 6, for Oral Examination, and to bring their Laboratory Note-Books.)

#### PART I.

1. Define in both magnitude and direction the average acceleration of a particle over any interval of time during which the velocity has changed from a given magnitude and direction to others. Hence define acceleration of the particle for a given instant. Show how to represent the velocity and the average acceleration graphically.

2. A particle moves with uniform speed  $v$  in a circular path of radius  $a$ ; show that the change of velocity for an interval of time in which an arc subtending an angle  $\theta$  at the centre is described is  $2v \sin(\theta/2)$ . Prove that the average acceleration is  $2v^2 \sin(\theta/2)$  divided by  $a\theta$ , and hence prove that for a particular instant the acceleration is towards the centre and of amount  $v^2/a$ .

3. A mass  $m$  is attached by a chord to a balloon which has a vertical acceleration  $a$ ; find the stretching force in the chord.

A mass of one cwt. is placed on a lift; find the force it exerts on the lift, (1) when the latter is descending vertically with uniform acceleration 10 feet per second per second, (2) when it is ascending vertically with uniform acceleration 12 feet per second per second. The value of  $g$  is 32 feet per second per second.

4. Define work done by a force. Give illustrations. Define activity and energy and state the principle of conservation of energy.

Find the work done against gravity in dragging 40 tons a distance of 200 feet along an incline which makes an angle of  $30^\circ$  with the horizontal. What is the horse-power of an engine which can raise 36 tons of coal per hour from a pit 600 feet deep, supposing 20 per cent. of the whole power of the engine to be wasted?

5. Explain the meaning of the term "elastic forces" as applied to a body under strain. How do these differ from the so-called "viscous forces"? Explain what is meant by "Young's modulus of elasticity."

A copper wire whose length is 440.7 cms. and diameter 1.05 mms. is elongated 0.27 cms. by a weight of 6350 grammes. Find its Young's modulus.

6. Define density and specific gravity.

How would you proceed to determine

(1) the specific gravity of a liquid,

(2) the specific gravity of a solid less dense than water?

What precautions would you take to ensure accuracy?

7. State Boyle's law.

Describe carefully an apparatus suitable for the experimental verification of Boyle's law for pressures both above and below that of the atmosphere. How is an investigation with the apparatus carried out?

## PART II.

1. State briefly the effects of heat in altering the physical state of bodies.

Define equal differences of temperature on an air thermometer. A gramme of ice is taken at  $-10^\circ\text{C}$ . and the substance is continuously heated; describe carefully the changes which it undergoes, giving quantitative results wherever you can.

2. Describe carefully Dulong and Petit's method of determining the coefficient of absolute expansion of mercury, showing how the result is to be computed from the observations.

3. Give a careful account of a method suitable for the determination of the latent heat of steam, describing the apparatus and the principal precautions to be observed.

20 grammes of steam at  $100^\circ\text{C}$ . are passed into a copper calorimeter of mass 80 grammes containing 200 grammes of water initially at  $10^\circ\text{C}$ . Supposing all the heat given out to be utilized in warming the water and calorimeter, find the rise in temperature of the calorimeter and contents. [Specific heat of copper .095.]

4. State the elementary laws of reflection and refraction of light. State the principle of reversal of the ray, and hence show how total reflection occurs for a ray passing in a transparent medium to the surface of a second transparent medium which is optically less dense.

When the moon is seen rising or setting over the surface of the sea a luminous track is frequently seen on the water between the observer and the moon. Explain this appearance.

5. What is meant by the power of a lens? Illustrate your answer by considering the physical meaning of the ordinary equation  $\frac{1}{u} + \frac{1}{v} = \frac{1}{f}$ , which connects two conjugate focal distances for a convex lens with the principal focal distance.

A candle flame is placed at a distance of 20 cms. in front of a convex lens and the image is found to be at a distance of 30 cms. on the other side of the lens. A concave lens is then placed in contact with the convex lens and the image is found now to be formed at a distance of 70 cms. further out. Find the focal length of the original lens and also that of the concave lens.

6. Describe the optical bench, and show how you would employ it to determine the radius of curvature of a concave spherical mirror. Illustrate your description by means of carefully drawn diagrams.

7. Define unit magnetic pole, magnetic moment of a magnet, and field intensity.

A bar magnet of which the pole strength is 150 is suspended horizontally in a magnetic field of intensity 0.15 c.g.s. units. Find the work done in deflecting the magnet through  $45^\circ$ . If the distance between the poles is 15 cms., find the couple necessary to keep the magnet in the deflected position.

8. Assuming a law of magnetic action of an element of a circuit, show that the field intensity at the centre of a circular conductor of radius  $a$  carrying a current  $\gamma$  is  $\frac{2\pi\gamma}{a}$ . Hence justify the usual definition of unit current in the c.g.s. system of units.

## CHEMISTRY.

*Engineering Candidates—Answer FOUR questions. Time, two hours.*

*All other Candidates—Answer SIX questions. Time, three hours.*

1. State Avogadro's Law and apply it to calculate (a) the ratio of the volumes occupied by equal weights of carbon monoxide and carbon dioxide, and (b) the percentage composition of the gaseous mixture which results from the combustion of carbon in air, assuming the oxygen to be entirely converted into carbon dioxide.

2. Give equations for the action of (a) sulphuric acid on copper, (b) nitric acid on copper, (c) heat on ammonium nitrate, (d) caustic soda on

phosphorus and (e) potassium permanganate solution on ferrous sulphate in presence of sulphuric acid.

3. Sulphur is burned in air and the product is passed into (a) caustic soda solution, (b) an aqueous solution of sulphuretted hydrogen, (c) nitric acid and (d) a suspension of manganese dioxide in water. State what happens in each case, giving equations.

4. What are the chief sources of zinc and how is it extracted from its ores? Give an account of the properties of zinc, stating the action on it of atmospheric influences, of acids and of alkalis.

5. Mention the principal ores of lead and describe the method of extracting the metal from any one of them. Give the properties and uses of the metal.

6. Describe in detail the preparation of crystallised specimens of potassium dichromate from chromic oxide, and of chrome alum from potassium dichromate.

7. Ethyl alcohol is heated with (a) acetic acid, (b) concentrated sulphuric acid, (c) an aqueous solution of potassium dichromate containing sulphuric acid. Explain what happens in each case, and give the structural formulae of the substances which are formed.

8. How is acetone prepared industrially? Give its properties, referring to the action of oxidising and reducing agents and other general reactions which characterise the ketones.

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### BOTANY—THREE HOURS.

1. Describe the physiological activity of a green leaf on a summer's day, and point out the difference between its condition in the morning and in the evening.

2. Give an account, with examples, of the leading types of flower in the Ranunculaceae, with special reference to arrangements for pollination.

3. Describe the leading types of disposition of sclerenchyma in stem and explain the mechanical efficiency in each case.

4. Give an account of the flora of a Scottish peat-moor, pointing out and explaining any special adaptations in the vegetative organs of the plants composing it.

5. Give a general account of the Florideae.

6. Give an account of *Equisetum arvense*: where is it found; how does it reproduce; and what are its past history and affinities?

ASTRONOMY—See p. 632.

GEOLOGY—See p. 638.

ZOOLOGY—See p. 685.

## D.—DEPARTMENT OF HISTORY AND LAW.

## EUROPEAN HISTORY, 476-1453.

## FIRST PAPER—THREE HOURS.

*(Two questions from each section.)*

## A.

1. Write a short account of Theodoric, Chlodovech, Justinian, Lewis the Pious.
2. What do you know of the following?
  - (a) The Rise of the Papacy under Gregory the Great.
  - (b) The Battle of Poitiers.
  - (c) The Italian Policy of Otto I.
  - (d) The Cluniac Reformation.
3. Describe, by the aid of a map, the spread of the Saracen power.
4. Explain the significance of the restoration of the Empire by Charles the Great.

## B.

5. Describe the growth of the Eastern Empire under Basil II. Illustrate with a map.
6. Give some account of the part played by the Normans in European History in the eleventh century.
7. What do you understand by the name Burgundy?
8. Estimate the effects of the Crusades upon *either* German or English History.

## C.

9. Indicate the real nature of the disputes between the Empire and the Papacy in the reigns of Henry IV. and Frederick Barbarossa.
10. What was the work of Henry II. in England?
11. Illustrate the importance of the great Italian cities in the twelfth century.
12. *Either* give some account of the origin of European Universities or discuss any movement in literature, learning, or theology before the year 1200.

## SECOND PAPER—THREE HOURS.

*(Two questions from each section.)*

## A.

1. Contrast the condition of France at the beginning and at the end of the reign of Philip Augustus. Illustrate with a map of the great fiefs.
2. Do you consider that Gregory VII. or Innocent III. did most for the growth of the power of the Papacy?

3. Give some account of the rise of Venice, and account for its greatness.

4. Was Frederick II. more sinned against than sinning?

B.

5. What do you know of Louis IX., Alphonso X., Boniface VIII.?

6. Describe the coming of the Friars, and estimate the importance of St. Francis and St. Dominic.

7. Sketch the progress of the Turks in the thirteenth and fourteenth centuries. Illustrate with a map of their European possessions about the year 1400.

8. Explain briefly the circumstances which led to the "Babylonish Captivity" and to the ultimate return of the Popes from Avignon to Rome.

C.

9. Write short notes on the Albigenian Crusade, the Golden Bull, the rise of the Swiss Confederation.

10. What events led to the Council of Constance, and what were its most important results?

11. Indicate the part played by the Visconti family in Milanese history.

12. Account for the fall of the Eastern Empire and indicate the most important effects of the capture of Constantinople by the Turks.

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## BRITISH HISTORY.

### FIRST PAPER—THREE HOURS.

(Two questions from each section.)

A.

1. Explain the fall of Northumbria and Mercia, and the final triumph of Wessex.

2. What does England owe to Alfred the Great? Illustrate with a map Alfred's two treaties with Guthrum.

3. Give some account of the invasion of Sweyn and Canute and explain why its effects were so much less permanent than those of the Norman Conquest.

4. Write a short account of the career of Godwin.

B.

5. Indicate the most important changes in the Anglo-Saxon judicial and administrative system made by Norman kings.

6. Is it true to say that Scotland was Anglicized under Malcolm Canmore and Normanized under David I.?

7. Estimate the importance of Edward I. as an English king.

8. Indicate the relations between England and Scotland during the reign of Edward III.

C.

9. Explain the fall of Richard II.

10. What powers were possessed by the House of Commons at the death of Henry IV.?

11. Write a short account of the great Earl of Warwick.

12. Write short notes on the Constitutions of Clarendon, the Lords of the Articles, the Peasant's Revolt, the *Canterbury Tales*.

## SECOND PAPER—THREE HOURS.

(Two questions from each section.)

A.

1. Contrast the foreign policy of Henry VII. with that of Wolsey.

2. Compare the Reformation in England under Henry VIII. with the Scottish Reformation.

3. Was Mary Stuart's failure inevitable?

4. Give some account of Elizabeth's laws directed against (a) Roman Catholics, (b) Puritans.

B.

5. How far can you trace in the English career of James I. the effects of his previous experience in Scotland?

6. Explain the unpopularity acquired by Charles I. between 1625 and 1629.

7. How far did the Cromwellian Union form the model for the Union of 1707?

8. Can the Revolution of 1689 be described as a popular movement?

C.

9. Can you defend the Treaty of Utrecht from the attacks usually made upon it?

10. Is it true to say that Walpole was the saviour of the House of Hanover?

11. Trace with a map the campaign of Charles Edward in 1745-6. Had he ever any real chance of success?

12. Write a short account of the younger Pitt, with special reference to (a) his financial, and (b) his Irish Policy.



## II. FOR DEGREE WITH HONOURS.

(And for Snell Exhibition, April, 1907.)

## A.—GROUP OF CLASSICS.

## LATIN TRANSLATION—THREE HOURS.

## PART I.—VERSE.

## 1. Translate :

(a) VERGIL, *Georg.* iii. 414—434.(b) VERGIL, *Aen.* iii. 570—587.(c) HORACE, *Epp.* i. 5, 12—31.

## 2. Translate two of the following sections, according to your profession :

(a) LUCRETIVS, ii. 352—366, or LUCRETIVS, iii. 870—883, and PLAUTUS, *Mil. Glor.* III. i. 661—675, or PLAUTUS, *Trinummus*, 932—947.(b) JUVENAL, *Sat.* vii. 150—166.(c) PERSIVS, *Sat.* v. 30—45.

(d) CATVLLVS, 65, 9—24, and PROPERTIVS, ii. 31.

## PART II.—PROSE.

## 3. Translate :

(a) CICEO, *Phil.* vi. 4, 10—11, or CICEO, *Epp. Fam.* ix. 20, 1—2.

(b) LIVY, iii. 69, or LIVY, xxii. 22.

(c) TACITVS, *Ann.* xii. 60.

## PART III.—PASSAGES FOR COMMENT.

## 4. Translate, with short notes :

(a) VERGIL, *Aen.* vi. 842—847.(b) HORACE, *Ars Poet.* 52—58.

(c) Two of the following :

(i) LUCRETIVS. iv. 311—317, or LUCRETIVS, i. 95—100.

(ii) JUVENAL, *Sat.* viii. 1—5.(iii) PERSIVS, *Sat.* iii. 25—29.

(iv) CATVLLVS, 5, 10—13.

(v) CATVLLVS, 61, 181—3.

(d) CICEO, *Phil.* ii. 11, 26, or CICEO, *ad Att.* iv. 9, 1.

(e) LIVY, iii. 4, or LIVY, xxiii. 47.

(f) TACITVS, *Ann.* xiv. 28, 2.

## LATIN PROSE—THREE HOURS.

As he had fancied himself quite unperceived, he continued, as we proceeded, to rail against beggars with as much animosity as before ; he threw in some episodes on his own amazing prudence and economy, with his profound skill in discovering impostors ; he explained the manner in which he would deal with beggars were he a magistrate, hinted at enlarging some of the prisons for their reception, and told two stories of ladies that were robbed by beggar-men. He was

beginning a third to the same purpose, when a sailor with a wooden leg once more crossed our walks, desiring our pity, and blessing our limbs. I was for going on without taking any notice, but my friend looking wishfully upon the poor petitioner, bid me stop, and he would shew me with how much ease he could at any time detect an impostor.

He now therefore assumed a look of importance, and in an angry tone began to examine the sailor, demanding in what engagement he was thus disabled and rendered unfit for service. The sailor replied in a tone as angrily as he, that he had been an officer on board a private ship of war, and that he had lost his leg abroad in defence of those who did nothing at home. At this reply, all my friend's importance vanished in a moment; he had not a single question more to ask; he now only studied what method he should take to relieve him unobserved. He had however no easy part to act, as he was obliged to preserve the appearance of ill-nature before me, and yet relieve himself by relieving the sailor. Casting therefore a furious look upon some bundles of chips which the fellow carried in a string at his back, my friend demanded how he sold his matches; but not waiting for a reply, desired, in a surly tone, to have a shilling's worth. The sailor seemed at first surprised at his demand, but soon recollected himself, and presenting his whole bundle, Here, master, says he, take all my cargo, and a blessing into the bargain.

GOLDSMITH, *Citizen of the World*, Letter XXVI.

## LATIN GENERAL PAPER—TWO HOURS.

### A. UNPREPARED TRANSLATIONS.

Translate :

- (a) Inde cruentatis vertuntur in Orphea dextris  
 Et coeunt ut aves, si quando luce vagantem  
 Noctis avem cernunt. Structoque utrimque theatro  
 Ceu matutina cervus periturus harena  
 Praeda canum est, vatemque petunt et fronde virentes  
 Coniciunt thyrsos, non haec in munera factos;  
 Hae glaebas, illae direptos arbore ramos,  
 Pars torquent silices. Neu desint tela furori,  
 Forte boves presso subigebant vomere terram,  
 Nec procul hinc multo fructum sudore parantes  
 Dura lacertosi fodiebant arva coloni.  
 Agmine qui viso fugiunt, operisque relinquunt  
 Arma sui. Vacuosque iacent dispersa per agros  
 Sarculaeque rastrique graves longique ligones.  
 Quae postquam rapuere ferae, cornuque minaces  
 Divulsere boves, ad vatis fata recurrunt,  
 Tendentemque manus atque illo tempore primum  
 Irrita dicentem nec quicquam voce moventem  
 Sacrilegae perimunt. Perque os, pro Iuppiter ! illud  
 Auditum saxis intellectumque ferarum  
 Sensibus in ventos anima exhalata recessit.

OVID, *Metamorphoses*, XI. 23—43.

Quicquid est hoc, Marcia, quod circa nos ex adventicio fulget, liberi, honores, opes, ampla atria et exclusorum clientium turba referta vestibula, clara, nobilis, aut formosa coniux ceteraque ex incerta et mobili sorte pendentia alieni commodatque adparatus sunt. Nihil horum dono datur: collaticiis et ad dominos redituris instrumentis scena adornatur. Alia ex his primo die, alia secundo referentur, paucæ usque ad finem perseverabunt. Itaque non est quod nos suspiciamus tamquam inter nostra positi: mutua accepimus. Usus fructusque noster est, cuius tempus ille arbiter muneris sui temperat: nos oportet in promptu habere quæ in incertum diem data sunt, et adpellatos sine querela reddere. Pessimi debitoris est creditori facere convicium. Omnes ergo nostros, et quos superstites lege nascendi optamus et quos præcedere iustissimum ipsorum votum est, sic amare debemus, tamquam nihil nobis de perpetuitate, immo nihil de diuturnitate eorum promissum sit. Sæpe admonendus est animus, amet ut recessura, immo tamquam recedentia. Quicquid a fortuna datum est, tamquam exemptum auctore possideas. Rapite ex liberis voluptates, fruendos vos invicem liberis date et sine dilatione omne gaudium haurite. Nihil de hodierna nocte promittitur. Nimis magnam advocationem dedi: nihil de hac hora. Festinandum est. Instatur a tergo: iam disicietur iste comitatus, iam contubernia ista sublato clamore solventur. Rapina rerum omnium est: miseri nescitis fuga vivere. Si mortuum tibi filium doles, eius temporis quo natus est, crimen est. Mors enim illi denuntiata nascenti est. In hanc legem natus. Hoc illum fatum ab utero statim prosequatur.

SENECA, *Ad Marciam de Consol.* x. 1—5.

## B. HISTORY AND LITERATURE.

(*Not more than FIVE questions should be attempted.*)

1. What were the sources of imperial and public revenue under the early principate?

2. "Caesar came not to begin but to complete. The plan of a new polity suited to the times, long ago projected by C. Gracchus, had been maintained by his adherents and successors." Is this true?

3. Give an outline of the relations between Rome and Egypt before the year 31 B.C.

4. Account for the nature and development of the different functions of the Senate under the Republic.

5. What do you know of *either* the Greek colony at Rome under the Republic, *or* the Jewish colony there under the early Empire?

6. What do you learn from your authors about the difference between colloquial and literary Latin?

7. Compare the representation of city life at Rome in Horace with that which is given by Juvenal or Martial.

8. "*People say, Homer produced Virgil: if so, it is assuredly his noblest work.*" Criticise this remark.

9. What is meant by the Attic School of Oratory at Rome?

10. Discuss any view or definition of the nature of Poetry which you can remember to have been expressed or implied by any Roman author.

## GREEK TRANSLATION—THREE HOURS.

## A. PRESCRIBED BOOKS.

Translate into English :

- (a) HOMER, *Iliad*, XVI. 487—501.  
 (b) HOMER, *Odyssey*, X. 503—520.  
 (c) AESCHYLUS, *Agamemnon*, 975—1000.  
 (d) SOPHOCLES, *Antigone*, 450—470.  
 (e) THUCYDIDES, I. 121 or HERODOTUS, VII. 102-103.  
 (f) ARISTOTLE, *Poet.* 1450 b, 2—21 or ARISTOTLE, *Pol.* I. 1255 a, 1—21.  
 (g) PLATO, *Rep.* II. 380 c—381 b or PLATO, *Phaedo*, 66 b-e.

## B. OFFERED BOOKS.

Translate according to your profession :

- EURIPIDES, *Bacch.* 538—562 :  
 οἶαν οἶαν ὄργαν ἀναφαίνει . . . θῆρας ἀγρώτας.  
 EURIPIDES, *Hippol.* 1102—1118 :  
 ἦ μέγα μοι . . . βίον συνευτυχοίην.  
 EURIPIDES, *Medea*, 364—380 :  
 κακῶς πέπρακται . . . ἔστρωται λέχος.  
 ARISTOPHANES, *Clouds*, 986—999 :  
 ΑΔ. ἀρχαῖα γε . . . ἐνεοττοτροφήθης.  
 ARISTOPHANES, *Knights*, 1162—1176 :  
 ἀλλ' ἦ μεγάλως . . . τὴν χύτραν.  
 SOPHOCLES, *Ajax*, 596—621 :  
 ὦ κλεινὰ Σαλαμῖς, . . . μελέοις Ἀτρείδαις.  
 THUCYDIDES, VII. 69 :  
 καὶ οἱ μὲν . . . νομίζοντες ἐπιβοῶνται.  
 PLATO, *Symposium*, 215 e—216 c :  
 ἐγὼ γοῦν, . . . τοῦτω τῷ ἀνθρώπῳ.  
 DEMOSTHENES, *De Cor.* 45—47 :  
 ἐγὼ μὲν . . . ἀν ἀπολώλειτε.  
 HOMER, *Odys.* XII. 206—225.  
 HERODOTUS, V. 49 (part) and 50 :  
 ἔχεται δὲ τούτων . . . ἀγαγεῖν.  
 HERODOTUS, VI. 105—106 :  
 καὶ πρῶτα . . . τοῦ κύκλου.  
 HERODOTUS, IX. 37 :  
 Μαρδονίῳ δὲ . . . ἀπέθανε.

## GREEK COMPOSITION AND UNPREPARED TRANSLATION—THREE HOURS.

## 1. Translate into Greek :

It is proved that the public money has been converted to corrupt purposes by one of the most responsible and most confidential members of his Majesty's Cabinet. It is proved that a system of fraud and speculation has, for a period of above sixteen years, been carried on in one of the most important and expensive departments of Government

under the immediate control of Lord Melville, and that it has been committed in direct violation of an Act of Parliament—an Act which had been introduced and framed by himself. Shall it be endured that at a period when we are arrived almost at the extreme limits of possible taxation—when we are compelled to lay heavy imposts on the most essential articles of life, without which the poorest cannot subsist—shall it be endured that men holding the highest and most lucrative situations in the country shall violate the most salutary acts of the Legislature? Shall such men with impunity direct the public money to purposes of private emolument? The House of Commons, by their decision, have diffused general confidence and satisfaction and have entitled themselves to the gratitude of the country. It remains for us to perform our duty, in exercising the right of the people to express their sentiments on all public measures.

## 2. Translate into English :

(a) *Ἠληιάδων Ἀτλαγγενέων ἐπιτελλομενάων  
ἀρχεσθ' ἀμητοῦ· ἀρότιο δέ, δισομενάων.  
αἱ δὴ τοι νύκτας τε καὶ ἡμέρας τεσσαράκοντα  
κεκρύφαται. αὐτὶς δὲ περιπλομένοιο ἐνιαυτοῦ  
φαίνονται τὰ πρῶτα χαρασσομένοιο σιδήρου.  
οὗτός τοι πεδίῳ πέλεται νόμος, οἷ τε θαλάσσης  
ἐγγύθι ναιετάουσ', οἷ τ' ἄγκρα βησσήεντα,  
πόντου κυμαίνοντος ἀπόπρωθι, πίονα χῶρον  
ναίοισιν. γυμνὸν σπείρειν, γυμνὸν δὲ βωπτεῖν,  
γυμνὸν δ' ἀμαῖσθαι, εἰ χ' ὥρια πάντ' ἐθέλησθα  
ἔργα κομίζεσθαι Δημήτερος. ὥς τοι ἕκαστα  
ὥρι' ἀέξεται, μὴ πως τὰ μεταξὺ χατίζων  
πτώσσης ἄλλοτρίου οἴκου, καὶ μηδὲν ἀνίσσης.  
ὥς καὶ νῦν ἐπ' ἔμ' ἦλθες· ἐγὼ δὲ τοι οὐκ ἐπιδώσω,  
οὔδ' ἐπιμετρήσω· ἐργάζεω, νῆπιε Πέρση,  
ἔργα, τὰ τ' ἀνθρώποισι θεοὶ διέτεκμήραντο,  
μήποτε σὺν παίδεσσι γυναικὶ τε θυμὸν ἀχεύων,  
ζητεύης βίον κατα γείτονας, οἱ δ' ἀμελῶσιν.*

HESIOD, *Works and Days*, 383—400.

(b) τὸ δὲ περὶ τοῦ κυριωτάτου παρ' ἡμῖν ψυχῆς εἶδους διανοεῖσθαι δεῖ τῆδε, ὡς ἂν αὐτὸ δαίμονα θεὸς ἑκάστω δέδωκε, τοῦτο δὲ δὴ φαμεν οἰκίῃ μὲν ἡμῶν ἐπ' ἄκρῳ τῷ σώματι, πρὸς δὲ τὴν ἐν οὐρανῷ ξυγγένειαν ἀπὸ γῆς ἡμᾶς αἶρειν ὡς ὄντας φυτὸν οὐκ ἐγγεῖον, ἀλλὰ οὐράνιον, ὀρθότατα λέγοντες· ἐκείθεν γάρ, ὅθεν ἡ πρώτη τῆς ψυχῆς γένεσις ἔφυ, τὸ θεῖον τὴν κεφαλὴν καὶ ῥίζαν ἡμῶν ἀνακρεμαννύν ὀρθοῖ πᾶν τὸ σῶμα. τῷ μὲν οὖν περὶ τὰς ἐπιθυμίας ἢ περὶ φιλονεικίας τετετακότι καὶ ταῦτα διαπονοῦντι σφόδρα πάντα τὰ δόγματα ἀνάγκη θνητὰ ἐγγεγονέναι, καὶ παντάπασιν καθ' ὅσον μάλιστα θνητῷ γίγνεσθαι, τοῦτου μὴδὲ σμικρὸν ἑλλείπειν, ἅτε τὸ τοιοῦτον ἠΐξήκοτι· τῷ δὲ περὶ φιλομαθίαν καὶ περὶ τὰς ἀληθεῖς φρονήσεις ἐσπουδακότι καὶ ταῦτα μάλιστα τῶν αὐτοῦ γεγυμνασμένῳ φρονεῖν μὲν ἀθάνατα καὶ θεία, ἀνερπ ἀληθείας ἐφάπτηται, πᾶσα ἀνάγκη πού, καθ' ὅσον δ' αἱ μετασχεῖν ἀνθρωπίνῃ φύσει ἀθανασίας ἐνδέχεται, τοῦτου μὴδὲν μέρος ἀπολείπειν, ἅτε δὲ αἰεὶ θεραπεύοντα τὸ θεῖον ἔχοντά τε αὐτὸν εὖ κεκοσμημένον τὸν δαίμονα ξύνικον ἐν αὐτῷ διαφερόντως εὐδαίμονα εἶναι. θεραπεία δὲ δὴ παντὶ πάντως μία, τὰς οἰκείας ἑκάστω τροφὰς καὶ κινήσεις ἀποδιδόνα.

PLATO, *Timaeus*, 90 A—C (XLIII.).

## GREEK GENERAL PAPER—TWO HOURS.

1. Translate with *short notes* any *five* of the following :

(a) αὐτὰρ ἐπεὶ πόσιος καὶ ἐδητίος ἐξ ἔρον ἔντο,  
 κούροι μὲν κρητῆρας ἐπεστέψαντο ποτοῖο,  
 νώμησαν δ' ἄρα πᾶσιν ἐπαρξάμενοι δεπᾶεσσιν,  
 οἱ δὲ πανημέριοι μολπῇ θεὸν ἱλάσκοντο,  
 καλὸν αἰδόντες παιήονα, κούροι Ἀχαιῶν  
 μέλποντες Ἑκάεργον· ὁ δὲ φρένα τέρπετ' ἀκούων.

HOMER, *Iliad*, I. 469—474.

(b) ἀλλὰ μοι Αἴγισθος τεύξας θάνατόν τε μόρον τε  
 ἕκτα σὺν οὐλομένη ἄλόχῳ, οἰκόνδε καλέσσας,  
 δειπνίσσας, ὥς τίς τε κατέκτανε βοῦν ἐπὶ φάτῃ.

HOMER, *Odyssey*, XI. 409—411.

(c) ἔθρεψεν δὲ λέοντα  
 σῖνιν δόμοις ἀγάλακτον  
 οὔτως ἀνὴρ φιλόμαστον,  
 ἐν βιότου προτελείοις  
 ἄμερον, εἰφιλόπαιδα  
 καὶ γεραροῖς ἐπίχαρτον.

ÆSCHYLUS, *Agamemnon*, 717—722.

(d) ἡ δ' ὀξύθηκτος ἦδε βωμία πέριξ  
 λῦει κελαινὰ βλέφαρα, κωκύσασα μὲν  
 τοῦ πρὶν θανόντος Μεγαρέως κλεινὸν λάχος,  
 αὐθις δὲ τοῦδε, λοίσθιον δὲ σοὶ κακὰς  
 πράξεις ἐφμνήσασα τῷ παιδοκτόνῳ.

SOPHOCLES, *Antigone*, 1301—1305.

(e) πολλά δὲ καὶ ἄλλα ἔτι καὶ νῦν ὄντα καὶ οὐ χρόνῳ ἀμνηστούμενα καὶ οἱ  
 ἄλλοι Ἕλληνες οὐκ ὀρθῶς οἰοῦνται, ὥσπερ τοὺς τε Λακεδαιμονίων βασιλέας μὴ  
 μιᾷ ψήφῳ προστίθεσθαι ἐκάτερον, ἀλλὰ δυοῖν, καὶ τὸν Πιτανάτην λόχον αὐτοῖς  
 εἶναι, ὃς οὐδ' ἐγένετο πώποτε.

THUCYDIDES, I. 20. 15—20.

Or,

οὕτω δὴ οὐκ οἶδν τε γενόμενον βοηθέειν τὸν Γέλωνα τοῖσι Ἕλλησι, ἀποπέμ-  
 πειν ἐς Δελφοὺς τὰ χρήματα. πρὸς δὲ καὶ τὰδε λέγουσι, ὥς συνέβη τῆς αὐτῆς  
 ἡμέρης ἐν τε τῇ Σικελίᾳ Γέλωνα καὶ Θήρωνα νικᾶν Ἀμίλκαν τὸν Καρχηδόνιον,  
 καὶ ἐν Σαλαμῖνι τοὺς Ἕλληνας τὸν Πέρσην.

HERODOTUS, VII. 165—6.

(f) οἷον τὸ αὐτὸ ποιήσαντος ἱαμβεῖον Αἰσχύλου καὶ Εὐριπίδου, ἐν δὲ μόνον  
 ὄνομα μεταθέντος, ἀντὶ κυρίου εἰωθότος γλωτταν, τὸ μὲν φαίνεται καλὸν τὸ δ'  
 εὐτελές. Αἰσχύλος μὲν γὰρ ἐν τῷ Φιλοκτῆτῃ ἐποίησε

φαγέδαινα ἢ μου σάρκας ἐσθίει ποδός,

ὁ δὲ ἀντὶ τοῦ ἐσθίει τὸ θοινῶται μετέθηκεν. καὶ

νῦν δὲ μ' ἐὼν ὀλίγος τε καὶ οἰτιδανὸς καὶ ἄκιкус,

εἴ τις λέγοι τὰ κύρια μετατιθεῖς

νῦν δὲ μ' ἐὼν μικρὸς τε καὶ ἀσθενικὸς καὶ αἰδιδής.

ARISTOTLE, *Poet.* 1458 b 19—27.

Or,

αἴτιον δὲ τῷ Σωκράτει τῆς παρακρούσεως χρῆ νομίζειν τὴν ὑπόθεσιν οὐκ οὖσα ὀρθήν. δεῖ μὲν γὰρ εἶναι πως μίαν καὶ τὴν οἰκίαν καὶ τὴν πόλιν, ἀλλ' οὐ πάντως. ἔστι μὲν γὰρ ὡς οὐκ ἔσται προϊούσα πόλις, ἔστι δ' ὡς ἔσται μὲν, ἐγγὺς δ' οὖσα τοῦ μὴ πόλις εἶναι ἔσται χεῖρων πόλις, ὥσπερ κἂν εἴ τις τὴν συμφωνίαν ποιήσκειν ὁμοφωνίαν ἢ τὸν ῥυθμὸν βάσιν μίαν. ARISTOTLE, *Pol.* 1263 b 30—35.

(γ) Σιμμίας μὲν γάρ, ὡς ἐγώμαι, ἀπιστεῖ τε καὶ φοβεῖται, μὴ ἡ ψυχὴ ὅμως καὶ θεϊότερον καὶ κάλλιον ὢν τοῦ σώματος προαπολλύηται ἐν ἁρμονίας εἶδει οὖσα· Κέβης δὲ μοι ἔδοξε τοῦτο μὲν ἐμοὶ ξυγχωρεῖν, πολυχρονιώτερόν γε εἶναι ψυχὴν σώματος, ἀλλὰ τόδε ἀδελον παντί, μὴ πολλὰ δὴ σώματα καὶ πολλάκις κατατρίψασα ἡ ψυχὴ τὸ τελευταῖον σῶμα καταλιπούσα νῦν αὕτη ἀπολλύηται, καὶ ἢ αὐτὸ τοῦτο θάνατος, ψυχῆς δλεθρος, ἐπεὶ σῶμά γ' αὖ ἀπολλύμενον οὐδεν παύεται.

PLATO, *Phaedo*, 91 C-D.

Or,

ὅτι, εἰπον, δοκοῦσί μοι εἰς αὐτὴν (sc. τὴν ἀντιλογικὴν) καὶ ἄκοντες πολλοὶ ἐμπίπτειν καὶ οἰεσθαι οὐκ ἐρίζειν ἀλλὰ διαλέγεσθαι, διὰ τὸ μὴ δύνασθαι κατ' εἶδη διαιρούμενοι τὸ λεγόμενον ἐπισκοπεῖν, ἀλλὰ κατ' αὐτὸ τὸ ὄνομα διώκειν τοῦ λεχθέντος τὴν ἐναντίωσιν, ἔριδι, οὐ διαλέκτῳ πρὸς ἀλλήλους χρώμενοι.

PLATO, *Republic*, V. 45 A.

(Not more than FIVE of the following questions need be attempted.)

2. δηλοῖ δὲ . . . ἡ ἰσηγορίη ὡς ἔστι χρῆμα σπουδαῖον, εἰ καὶ Ἀθηναῖοι τυραννεύομενοι μὲν οὐδαμῶν τῶν σφεας περιοικέοντων ἦσαν τὰ πολέμια ἀμείνους, ἀπαλαχθέντες δὲ τυράννων μακρῷ πρῶτοι ἐγένοντο (Herodotus). How far does history support this judgment?

3. What is known of the growth and organization of the Peloponnesian confederacy?

4. What was the sovereign power in the Athenian constitution of the fifth century?

5. What part did Macedon play in the history of civilization?

6. What were the chief aids and obstacles to political unity in Greece?

7. Weigh any arguments you know in favour of the unity of authorship of the *Iliad* or *Odyssey*.

8. What light does comparative historical study throw on the state of society represented in Homer?

9. What traces do you find in your authors of development or reaction in religious thought?

10. Explain the localization of different forms of lyric in certain parts of the Greek world.

11. Illustrate from the period you know best the aid given by archaeology to historical study.

12. Illustrate from your authors the position of women in Greece, and show how it influenced literature and art.

13. Compare the practical standards of morality in Greece and in modern Europe.

## B.—GROUP OF MENTAL PHILOSOPHY.

## LOGIC.

## FIRST PAPER—THREE HOURS.

(Six questions to be attempted.)

1. "When Heraclitus says 'all is flowing' he enunciates Becoming as the fundamental feature of all existence, whereas the Eleatics saw the only truth in rigid processless Being."

Discuss, in reference to this statement, the value of Hegel's account of Early Greek Philosophy.

2. Compare the *Nous* of Anaxagoras with the Idea of the Good, in such a way as to bring out the nature of the advance made by Plato on the earlier thinkers.

3. Give a critical account of the genesis and development of Atomism in Greek thought.

4. Indicate the chief features of Democritus's theory of knowledge, and compare his position with that of Plato.

5. What did Aristotle mean by calling Zeno the inventor of Dialectic? Illustrate Zeno's method, and discuss the conclusions to be drawn, with regard to his own point of view, from his arguments.

6. "In Socrates for the first time the moral consciousness appears with complete clearness as an epistemological postulate."

Discuss this statement, with special reference to the Socratic view of knowledge.

7. "You argue that a man cannot inquire either into that which he knows or into that which he does not know; for if he knows he has no need to inquire, and, if not, he cannot inquire, for he does not know the very subject about which he has to inquire" (*Meno*).

Discuss Plato's treatment of this dilemma.

8. State and criticise Plato's views on the relation of soul and body. Indicate the general connection between his Psychology and his Metaphysics.

9. Discuss Plato's view of the relation between the ideal and the phenomenal world, as it appears in the *Philebus* and the *Timæus*.

## SECOND PAPER—THREE HOURS.

(Six questions to be attempted, of which FOUR must be taken from Section A and TWO from Section B.)

## SECTION A.

1. What is implied in speaking of Kant's method as 'critical'?

Discuss, from the point of view of the critical method, the distinction between sense and understanding.



2. "Space and time are shown on special grounds to be inexplicable by reference to external things or to states of subjective experience; but they are placed in no intimate relation to the unity of self-consciousness."

Comment on this account of Kant's treatment of space and time.

3. State and examine Kant's doctrine of Inner Sense.

4. What does Kant mean by "the transcendental unity of apperception"? Show the bearing of the transcendental deduction of the categories on the relation of conception to perception.

5. Examine the view that the syllogism is the form to which *all* correct reasoning may be ultimately reduced.

6. State and criticise Professor James's account of emotion.

### SECTION B.

1. "When our senses do actually convey into our understandings any idea, we cannot but be satisfied that there doth something at that time really exist without us, which doth affect our senses and actually produce that idea which we then perceive. . . . But this knowledge extends as far as the present testimony of our senses, employed about particular objects that do then affect them, and no farther" (Locke).

Examine this statement, critically considering the restriction of the testimony of the senses to the present.

2. Compare the views of Berkeley and Hume on the identity of objects.

3. Follow the doctrine of the self as "thinking substance" through Locke, Berkeley, and Hume.

4. Examine the statement that "Hume's system is the self-refutation of the fallacy of the abstract particular."

### THIRD PAPER—TWO HOURS.

(*Not more than THREE questions to be attempted.*)

1. In what sense is conceivability a test of truth? Refer (*a*) to the Laws of Thought and (*b*) to the systematic connection of ideas.

2. Discuss the significance of the antithesis of Subjective and Objective.

3. "All the various systems of ideas, which grow up in the process of the ideal construction of the world and the self, have their conative aspects. Each system of ideas is a general tendency to feel and act in certain ways."

Explain and illustrate this view by reference to the daily life (*a*) of the adult and (*b*) of the child.

4. Discuss the statement that "Psychology is not one study but many." What is the function of Psychology in a philosophical discipline?

## MORAL PHILOSOPHY.

## FIRST PAPER—THREE HOURS.

1. Show the significance of the *conatus in suo esse perseverandi* for Spinoza's view of knowledge and conduct.
2. What does Spinoza mean by "the intellectual love of God"? Is his view here necessarily Pantheistic?
3. Examine critically Kant's idea of the *Summum Bonum*.
4. Discuss the Kantian doctrine that no consequence of any kind can contribute to, or detract from, the moral goodness of an act.
5. Compare the practical value of Utilitarianism and of Green's theory in cases of perplexity of conscience, such as that of Jeanie Deans.
6. Examine the distinction of "moral" and "natural" in Hume, and give a critical account of his theory of Justice.
7. State and criticise Aristotle's view of the relation of Reason and Passion. On what grounds has the Stoic doctrine been regarded as an advance upon Aristotle's?
8. Explain carefully Aristotle's conception of *προαίρεσις*. Discuss his characterisation of voluntary action, referring specially to the part played by Knowledge.

## SECOND PAPER—THREE HOURS.

1. "The only *datum* that Metaphysics can accept is a problem" Discuss this statement.
2. Is vice ever deliberate?
3. What is meant by "Experience"? Can the object of experience be itself experience?
4. "Nothing is universal except self-consciousness." Explain this view of the universal, and contrast it with that of Dr. Ward.
5. "There cannot be opposition except where there is unity." Apply this view to the relation of good and evil.
6. "An eternal consciousness which realizes itself in time is either not eternal or not in time." Is this true?
7. "All intellection is purposive, and all purpose is intellectual; hence the distinction between theory and practice has only conventional value." Examine this view in relation to Pragmatism.
8. "Relations are valid but not real." Discuss this statement. Would you distinguish between relations and qualities?

## THIRD PAPER—TWO HOURS.

1. In what way did Aristotle develop Plato's view of the relation of Ethics and Politics? Illustrate your answer by reference to their doctrine of Justice.

2. What does Rousseau mean by "the general will" of the State? In what sense is "the general will" real?

3. "Where force is opposed to freedom, the force which opposes that force is right." Apply this conception to the question of the limits of State interference.

4. What is the aim of the State in inflicting punishment?

## C.—GROUP OF MATHEMATICS AND NATURAL PHILOSOPHY.

### MATHEMATICS.

#### FIRST PAPER—THREE HOURS.

(NOTE.—Candidates are requested not to attempt more than *SIX* of the following questions.)

1. Prove that the lines

$$ax + by + c = \pm k(Ax + By + C),$$

for all values of  $k$ , are harmonically conjugate with respect to the lines  $ax + by + c = 0$ ,  $Ax + By + C = 0$ .

If the four lines  $a_0x^4 + 4a_1x^3y + 6a_2x^2y^2 + 4a_3xy^3 + a_4y^4 = 0$  form a harmonic pencil, prove that

$$\begin{vmatrix} a_0 & a_1 & a_2 \\ a_1 & a_2 & a_3 \\ a_2 & a_3 & a_4 \end{vmatrix} = 0.$$

2. A variable chord of the parabola  $y^2 = 4ax$  is of constant length  $c$ , prove that its pole moves on the curve given by

$$(y^2 - 4ax)(y^2 + 4a^2) = a^2c^2.$$

Find the equation to the corresponding locus for the ellipse given by

$$x^2/a^2 + y^2/b^2 = 1.$$

3. Prove that the asymptotes of the general conic

$$(a, b, c, f, g, h)(x, y, 1)^2 = 0$$

are given by the equation

$$bX^2 - 2hXY + aY^2 = 0,$$

where

$$X \equiv ax + hy + g, \quad Y \equiv hx + by + f.$$

Find the equation to the parabola which has contact of the third order with the rectangular hyperbola  $xy = c^2$ , at the point  $(ct, c/t)$ ; and prove that it cuts the asymptotes in points which are equidistant from the common tangent.

4. Find the conditions that the general equation of the second degree in trilinear coordinates may represent a circle.

Find the equation of the nine-point circle of the triangle of reference, and the equation of the radical axis of the nine-point circle and the circumcircle.

5. Prove that the coordinates  $(x_1, y_1)$ ,  $(x_2, y_2)$ ,  $(x_3, y_3)$  of the three points in which any straight line cuts the curve  $x^3 + y^3 = 2a^3$  satisfy the equation

$$(x_1 + x_2 + x_3)(y_1 + y_2 + y_3) = (x_1y_1 + x_2y_2 + x_3y_3).$$

If the tangent at the point  $P$  on the curve meet the curve again in  $Q$ , and also meet the cubic  $x^3 + y^3 + 6a^2xy = 2a^3$  in  $A$ ,  $B$ ,  $C$ , shew that

$$\frac{3}{PQ} = \frac{1}{PA} + \frac{1}{PB} + \frac{1}{PC}.$$

6. Define a singular point on a plane curve. Examine the nature of the origin on the curve given by the equation

$$y^2 - 3x^2y + x^3y = x^5,$$

and trace the curve.

7. Give the full trigonometric method of solving the general cubic equation, and shew how the process establishes the conditions (1) for three real roots, and (2) for two complex roots.

Find the three roots of the equation

$$8x^3 - 6x = 1.$$

8. Resolve  $\frac{x^{2p}}{x^{2q} + 1}$  into the sum of partial fractions with quadratic denominators,  $p$  and  $q$  being positive integers and  $p$  less than  $q$ .

From your result deduce (or otherwise prove) that

$$\frac{x^{2n-1}}{x^{2n} + 1} = \frac{1}{n} \sum_{r=0}^{n-1} \frac{x^r - \cos(2r+1)\frac{\pi}{2n}}{x^2 - 2x \cos(2r+1)\frac{\pi}{2n} + 1},$$

$n$  being a positive integer.

9. State the condition which is necessary and sufficient in order that a function,  $f(n)$ , of the integral variable  $n$  should tend to a limit as  $n$  tends to infinity.

If  $f(z, n) = 1 + z + z^2/2! + \dots + z^n/n!$ , prove that  $f(z, n)$  tends to a limit, when  $n$  tends to infinity, for any given value of  $z$ . Prove further that  $\left(1 + \frac{z}{n}\right)^n$  tends to the same limit, and discuss the importance to exponential theory of this fact.

10. Explain the statement that  $\log z$  is a many-valued function of  $z$ .

If  $w = \log z$ , and the  $z$ -point describes a closed curve round the origin of the  $z$ -plane, discuss, with drawings, the change that takes place in  $w$ .

11. What is a branch-point of a many-valued function?

Illustrate with reference to the functions  $z^{\frac{3}{2}}$ ,  $(z-1)\sqrt{z}$ .

12. Establish for any spherical triangle the formula

$$\cos a = \cos b \cos c + \sin b \sin c \cos A.$$

If  $D$ ,  $E$ ,  $F$  are the middle points of the sides  $BC$ ,  $CA$ ,  $AB$  respectively of a spherical triangle, prove that

$$\cos EF / \cos \frac{a}{2} = \cos FD / \cos \frac{b}{2} = \cos DE / \cos \frac{c}{2}.$$

13. In any spherical triangle, prove that

$$\tan r = n/\sin s,$$

$$\text{where } 4n^2 = 1 - \cos^2 a - \cos^2 b - \cos^2 c + 2 \cos a \cos b \cos c.$$

If a spherical triangle be inscribed in a small circle of radius  $R$  and circumscribed about another of radius  $r$ , and if  $\delta$  be the angular distance between the poles of the circles, prove that

$$\cos^2 \delta = \cos^2 R \sin^2 r + \cos^2 (R - r).$$

## SECOND PAPER—THREE HOURS.

(NOTE.—Candidates are requested not to attempt more than NINE of the following questions.)

1. Define the *limit* of a function of  $x$ , as  $x$  tends to the limit  $a$ , and find the derivatives of  $x^n$  and  $\sin x$  without using infinite series.

Differentiate  $\frac{x^2 - 8x + 10}{3x^2 - 10x + 9}$  and graph the function, stating for what values of  $x$  the function has turning-values, and at what points and angles the graph cuts the axes.

2. Define  $\frac{d^n y}{dx^n}$ . Give a rigorous statement and proof of Maclaurin's Theorem in a form involving an expression for the Remainder.

If  $y = e^{\sin^{-1} x}$ , prove that

$$(1) (1 - x^2) \frac{d^2 y}{dx^2} = x \frac{dy}{dx} + y,$$

$$(2) \frac{d^{n+2} y}{dx^{n+2}} = (n^2 + 1) \frac{d^n y}{dx^n}, \text{ when } x = 0.$$

Expand  $y$  in ascending powers of  $x$ .

3. Prove that  $\frac{\partial^2 z}{\partial x \partial y} = \frac{\partial^2 z}{\partial y \partial x}$ ,

where  $z$  is a function of the two independent variables  $x$  and  $y$ ; stating, as they arise, the conditions for the validity of the proof.

If  $x = e^u \cdot v$  and  $y = e^u/r$ , express  $\frac{\partial^2 z}{\partial x \partial y}$  in terms of  $u$ ,  $v$ , and partial differential coefficients of  $z$  with respect to  $u$ ,  $v$ .

4. If  $xOx'$  and  $yOy'$  are the tangent and normal to a curve at the origin, establish the approximations

$$x = s - \frac{s^3}{6\rho^2} + \frac{\rho'}{8\rho^3} s^4,$$

$$y = \frac{s^2}{2\rho} - \frac{\rho'}{6\rho^2} s^3 + \frac{1}{24} \left( \frac{2\rho'^2}{\rho^3} - \frac{\rho''}{\rho^2} - \frac{1}{\rho^3} \right) s^4,$$

for a point near the origin,  $s$  being measured from the origin and  $\rho$ ,  $\rho'$ ,  $\rho''$  being the radius of curvature, etc., at the origin.

If tangents at  $A, B$ , two near points on a curve, meet at  $C$ , prove that

$$AC + BC + 2AB = 3 \text{ arc } AB,$$

neglecting powers of the arc beyond the third.

5. Prove that the radius of curvature,  $\rho$ , at any point on a curve defined by its  $p$  and  $r$  equation, is equal to  $r \frac{dr}{dp}$ .

Find the  $p, r$  equation of the curve defined in polar coordinates by  $r = a \sin^2 \theta$ , and deduce the value of  $\rho$ .

6. Prove that

$$\int \frac{ax^2 + 2\beta x + \gamma}{(Ax^2 + 2Bx + C)^2} dx,$$

is a rational algebraic function of  $x$ , provided

$$A\gamma + C\alpha = 2B\beta,$$

and evaluate the integral when this condition is satisfied.

7. If  $f(x)$  is a one-valued continuous function of  $x$  and if  $A$  is the area included between the axis of  $x$ , the curve  $y = f(x)$ , the fixed ordinate  $x = a$  and the variable ordinate  $x = \xi$ , prove that  $\frac{dA}{d\xi} = f(\xi)$ .

Give the general analytical definition of  $\int_a^b f(x) dx$ , where  $f(x)$  is a one-valued continuous function of  $x$ , and state the assumptions involved. Shew that the sum

$$\frac{1}{n+1} + \frac{1}{n+2} + \dots + \frac{1}{np}, \quad (p \text{ a positive integer})$$

has for limit  $\log p$  when  $n$  tends to infinity.

8. Integrate

$$\int \frac{3x^2 + 2x + 1}{(x+2)(x^2+x+1)^2} dx, \quad \int \frac{dx}{(3+2\cos x)^2}, \quad \int \frac{dx}{(2+3\cos x)^3},$$

$$\int \sqrt[3]{\tan \theta} \cdot d\theta.$$

9. Shew how to reduce  $\int \frac{dx}{(x-p)^m \sqrt{ax^2+2bx+c}}$  to an integral of the form  $\int \frac{dx}{\sqrt{ax^2+2bx+c}}$ .

Obtain the integral functions of

$$\frac{1}{(x-1)\sqrt{x^2+x+1}} \quad \text{and} \quad \frac{3x+1}{(x^2-1)\sqrt{4x^2+8x+3}}.$$

10. If  $u, v$  are given in terms of  $x, y$  by two equations, prove that

$$\iint r^2 dS = \iint r^2 dx dy = \iint r^2 du dv \left/ \frac{\partial(u, v)}{\partial(x, y)} \right.,$$

explaining the notation.

Investigate  $\iint xy \, dS$ , taken over one of the curvilinear quadrilaterals bounded by the four curves

$$x^2 + y^2 = a^2, \quad x^2 + y^2 = b^2, \quad x^2 - y^2 = c^2, \quad x^2 - y^2 = d^2.$$

11. Find the necessary and sufficient condition that three planes should have a common line of intersection.

Shew that the equations to any of the lines that intersect the three given lines  $y=b$ ,  $z=-c$ ;  $z=c$ ,  $x=-a$ ;  $x=a$ ,  $y=-b$ , can be written in the form

$$y - b + \lambda(z + c) = 0, \quad x - a + \mu(y + b) = 0,$$

where  $\lambda$  and  $\mu$  are connected by the equation

$$\lambda\mu c - b\mu + a = 0,$$

and find the equations to the two lines that intersect the three given lines and the line  $x/a = y/b = z/c$ .

12. Shew that the plane  $lx + my + nz = 0$  cuts the cone

$$\phi(x, y, z) \equiv ax^2 + by^2 + cz^2 + 2fyz + 2gzx + 2hxy = 0$$

in perpendicular generators if

$$(a + b + c)(l^2 + m^2 + n^2) - \phi(l, m, n) = 0;$$

and deduce, or otherwise determine, the condition that the cone should have three mutually perpendicular generators.

Through a fixed point  $(k, 0, 0)$  pairs of perpendicular tangent lines are drawn to the surface  $ax^2 + by^2 + cz^2 = 1$ . Shew that the plane through any pair touches the cone

$$\frac{(x-k)^2}{(ak^2-1)(b+c)} + \frac{y^2}{c(ak^2-1)-a} + \frac{z^2}{b(ak^2-1)-a} = 0.$$

13. Find the conditions that the general equation of the second degree should represent a surface of revolution, and determine the equations to the axis.

Shew that the axis of the conicoids of revolution that pass through the six points  $(\pm a, 0, 0)$ ,  $(0, \pm b, 0)$ ,  $(0, 0, \pm c)$  lie in the coordinate planes or on the cone

$$\frac{y^2 - z^2}{a^2} + \frac{z^2 - x^2}{b^2} + \frac{x^2 - y^2}{c^2} = 0.$$

14.  $OP$ ,  $OQ$ ,  $OR$  are conjugate semi-diameters of the ellipsoid  $x^2/a^2 + y^2/b^2 + z^2/c^2 = 1$ , and  $A_1$ ,  $A_2$ ,  $A_3$  are the measures of  $\angle OQR$ ,  $\triangle ORP$ ,  $\triangle OPQ$ ; shew that

$$A_1^2 + A_2^2 + A_3^2 = \frac{1}{4}(b^2c^2 + c^2a^2 + a^2b^2).$$

Shew that equal conjugate diameters of the ellipsoid lie on the cone  $\Sigma \frac{x^2}{a^2}(2a^2 - b^2 - c^2) = 0$ , and that the plane through a pair of equal conjugates touches the cone

$$\Sigma x^2/a^2(2a^2 - b^2 - c^2) = 0.$$

## THIRD PAPER—Two Hours.

(NOTE.—Candidates are requested not to attempt more than FIVE questions.)

1. Find the equation to the osculating plane at a point of a curve, and shew that if all the osculating planes pass through a fixed point the curve is plane.

Prove that there are three points on the curve given by

$$x = at^3 + b, \quad y = 3ct^2 + 3dt, \quad z = 3et + f,$$

such that the osculating planes at them pass through the origin, and that the points lie in the plane  $3cex + afy = 0$ .

2. Solve the differential equations :

$$(i) \quad y^2(px + y)^2 = (x^2 + y^2)^2.$$

$$(ii) \quad x \frac{dy}{dx} = x^4 - y^2 + 2y.$$

$$(iii) \quad \frac{d^2y}{dx^2} - 5 \frac{dy}{dx} + 6y = \cos x + xe^{-x}.$$

$$(iv) \quad \begin{cases} t \frac{dx}{dt} + 2(x - y) = t + 2t^2, \\ t \frac{dy}{dt} + x + 5y = 9t^2. \end{cases}$$

3. Shew that any differential equation of the form

$$ay + bx^2 + cxy + y^2 = 0$$

can be integrated by differentiation.

Integrate the particular cases :

$$(i) \quad 4y + 3x^2 + 2xy + y^2 = 0,$$

$$(ii) \quad 12y + 15x^2 + 2xy + y^2 = 0.$$

Trace both primitives : find their relations to the  $p$ -discriminants, and whether these discriminants are singular solutions.

4. Find the condition that three functions  $u_1, u_2, u_3$  of three variables  $x_1, x_2, x_3$  may be such that an identical relation exists of the form  $\phi(u_1, u_2, u_3) = 0$ , where  $\phi$  does not explicitly contain  $x_1, x_2, x_3$ .

If  $x_1, x_2, x_3$  are functions of three other variables  $\xi_1, \xi_2, \xi_3$ , prove that

$$\frac{\partial(u_1, u_2, u_3)}{\partial(x_1, x_2, x_3)} \cdot \frac{\partial(x_1, x_2, x_3)}{\partial(\xi_1, \xi_2, \xi_3)} = \frac{\partial(u_1, u_2, u_3)}{\partial(\xi_1, \xi_2, \xi_3)}.$$

Solve the equation

$$(y^2 + yz + z^2)dx + (z^2 + zx + x^2)dy + (x^2 + xy + y^2)dz = 0.$$

5. If  $u \equiv f_1(x, y, z) = a$  and  $v \equiv f_2(x, y, z) = b$ ,  $a$  and  $b$  being constants, constitute the complete primitive of the simultaneous equations

$$dx/P = dy/Q = dz/R,$$



prove that  $F(u, v) = 0$  constitutes the complete primitive of the partial differential equation

$$P \frac{\partial z}{\partial x} + Q \frac{\partial z}{\partial y} = R,$$

where  $F$  denotes an arbitrary functional form and  $P, Q, R$  are functions of  $x, y, z$ .

Solve the partial differential equations

$$(i) \quad x \frac{\partial z}{\partial x} + (x + y) \frac{\partial z}{\partial y} = x + y + z,$$

$$(ii) \quad x^2 p^2 + y^2 q^2 = z.$$

6. If  $z = x + iy$  and  $u, v$  are functions of the real variables  $x$  and  $y$ , specified as the real components of an analytic function  $w$  of the complex variable  $z$ , prove that

$$\frac{\partial^2 V}{\partial x^2} + \frac{\partial^2 V}{\partial y^2} = h^2 \left( \frac{\partial^2 V}{\partial u^2} + \frac{\partial^2 V}{\partial v^2} \right),$$

where  $V$  is a function of the variables, and  $h = \left| \frac{dw}{dz} \right|$ .

State what you know of the uses of this theorem.

7. Give the general definition of the definite integral for functions of the complex variable. Establish a criterion for the vanishing of the integral over an arc of the infinite circle in the  $z$ -plane.

Discuss  $\int_0^x \frac{\sin x}{x} dx$  with reference to both limits, and find its value by means of Cauchy's Theorem.

8. Evaluate the definite integrals

$$\int_0^x \frac{\cos ax - \cos bx}{x} dx \quad (a, b \text{ both positive});$$

$$\int_0^x \frac{\sin^3 x}{x^2} dx; \quad \int_0^x \frac{\sin^3 x}{x^3} dx.$$

## NATURAL PHILOSOPHY.

### FIRST PAPER—THREE HOURS.

(Candidates are requested not to attempt more than EIGHT of the following questions.)

1. Show that the path obtained by compounding two simple harmonic motions, of period  $\tau$  and of amplitudes  $a, b$  respectively, along two perpendicular lines is an ellipse.

Show that when the moving point is at a distance  $r$  from the centre of the ellipse its velocity  $v$  satisfies the relation

$$v^2 = \frac{4\pi^2}{\tau^2} (a^2 + b^2 - r^2).$$

2. Obtain the expressions  $\frac{v^2}{\rho}$  and  $v \frac{dr}{ds}$  for the normal and tangential components of the acceleration of a point moving on a curve  $s$ , where  $\rho$  is the radius of curvature.

A projectile is thrown obliquely upward in air, the resistance of which is proportional to the square of the velocity; show that if  $u_0$  is the initial horizontal component of velocity,  $u$  the horizontal component after an arc  $s$  has been traversed

$$u = u_0 e^{-\frac{gs}{v^2}},$$

where  $p$  is the greatest velocity that a body can acquire in falling under the given resistance.

3. Show that the Newtonian potential at all points in the interior of a uniform spherical shell has the same value.

Show how the potential at any external point can be deduced for any distance-law of force from that of the inverse point with respect to the sphere. Hence show that the Newtonian potential is the same as if the whole mass were situated at the centre.

Show that the attraction of a thin uniform hemispherical shell of mass  $M$  and radius  $x$  on a mass  $M'$  which is at (or may be considered as at) the centre is  $\frac{1}{2}\gamma MM'/x^2$ .

4. Prove analytically, by integration by parts or otherwise, that the two integrals

$$4\pi^2 \int_0^a f(r) dr \int_0^r x^2 f(x) dx,$$

$$4\pi^2 \int_0^a f(r) r^2 dr \int_r^a f(x) dx$$

are equivalent.

Show that either is the attraction between two halves of a sphere of density  $f(x)$  at distance  $x$  from the centre, and of radius  $a$ .

5. Defining an elliptic homoeoid as a shell of matter of uniform density contained between two similar and similarly situated ellipsoids, show that the thickness of such a shell at any point is proportional to the length of the perpendicular from the centre on the tangent plane at the point.

Prove that such a shell exerts no attraction on an internal particle.

6. Distinguish between rolling and sliding friction. How may the values of the respective coefficients of friction be ascertained experimentally?

A uniform cylinder of radius  $r$ , revolving with angular velocity  $\omega$  about its axis, is gently laid with its axis horizontal on a horizontal table with which its coefficient of sliding friction is  $\mu$ . Prove that it will slip for a time  $\frac{r\omega}{3\mu g}$ , and then roll with angular velocity  $\frac{\omega}{3}$ .

7. State Hooke's Law.

A mass  $A$  is hung by a thread from a fixed support, and an equal mass  $B$  hangs from  $A$  by a light spiral spring, whose length when unstretched is  $2l_0$ , and when suspended as stated is  $2l$ . Prove that if

the thread supporting  $A$  breaks, the period  $T$  of the changes in length of the chord is  $2\pi\sqrt{\frac{l-l_0}{g}}$ , and the distance through which  $B$  falls from rest in a time  $t$  is

$$\frac{1}{2}gt^2 - \frac{gT^2}{2\pi^2} \sin^2 \frac{\pi t}{T}.$$

8. A locomotive of weight  $W$  has its centre of gravity at a distance  $H$  from the plane of contact of the wheels with the rails, and the horizontal distance between the points of contact of the wheels on one axle with the rails is  $b$ . The locomotive runs on a curve of mean radius  $R$ , at a speed  $V$ . The outer rail on the curve is raised a height  $h$  above the inner. Find (neglecting the rotation of the wheels) the distribution of the weight on the outer and inner wheels, and the critical speed when the wheels on one side just cease to press.

Work out the limiting speed in miles per hour for the following data:  $W=53$  tons,  $b=33$  inches,  $H=58$  inches,  $h=3.5$  inches,  $R=528$  feet.

9. In connection with the Salisbury accident to which the numerical data in question 8 approximately apply, it has been suggested that the stability of a locomotive is seriously affected by the rotation of the wheels. Discuss the question of the effect of the rotation of the wheels of a vehicle moving round a curve on stability, and, if you can, give an expression by which this effect can be computed.

10. What are the canonical equations of motion of a material system? Show how these equations may be obtained by transformation of the Lagrangian equations.

Illustrate the integration of the canonical equations by an example or examples.

## SECOND PAPER—THREE HOURS.

(N.B.—Candidates are requested not to attempt more than EIGHT of the following questions.)

1.  $S$  is a plane section of a homogeneous solid of unit density.  $O$  is the centroid of  $S$  and  $OX$ ,  $OY$  are principal axes of inertia of  $S$ . A plane inclined at a small angle to  $S$  intersects it in  $OX$ . Show that the wedges cut from the solid by the two planes are of equal volume and their centres of inertia are in a plane perpendicular to  $OY$ .

A body floating in a liquid is given a small vertical displacement  $z$ , and rotations through infinitely small angles  $\theta$ ,  $\theta'$  round the principal axes in the plane of flotation. Show that the work required is

$$\frac{1}{2}w[Sz^2 + (Sk^2 - Vh)\theta^2 + (Sk'^2 - Vh')\theta'^2],$$

$w$  being the weight of unit volume of the body,  $S$  the section by the plane of flotation,  $k$  and  $k'$  radii of gyration of  $S$  round the principal axes,  $h$  the depth of the centre of buoyancy below the centroid, and  $V$  the immersed volume of the body.

An ellipsoid floats in a liquid of twice its density. Investigate its stability for different positions of equilibrium.

2. Show that if the motion of a liquid takes place in planes through the axis of  $z$  and if  $u$  and  $w$  are velocity components perpendicular and parallel to  $Oz$ , and  $\bar{\omega}^2 \equiv x^2 + y^2$ , then

$$u = -\frac{1}{\bar{\omega}} \frac{d\psi}{dz}, \quad w = \frac{1}{\bar{\omega}} \frac{d\psi}{d\bar{\omega}}.$$

If there is a velocity potential  $\phi$  show that

$$\frac{d^2\psi}{d\bar{\omega}^2} + \frac{d^2\psi}{dz^2} - \frac{1}{\bar{\omega}} \frac{d\psi}{d\bar{\omega}} = 0.$$

3. Prove that under certain conditions, a vortex in a perfect fluid is always constituted of the same elements of fluid. State the conditions referred to.

Prove that the product of the angular velocity of a vortex and the area of the cross section does not vary with the time and is the same all along the vortex.

4. The boundary of a fluid which is moving irrotationally in two dimensions is a cylinder moving with velocity  $u$  perpendicular to its length. Show that the stream function  $\psi$  will satisfy the condition  $\psi + uy = \text{constant}$  at the surface of the cylinder,  $u$  being parallel to  $Ox$ .

Apply the transformations

$$x + iy = c \cosh(\xi + i\eta),$$

$$\phi + i\psi = C e^{-(\xi + i\eta)}$$

to the investigation of the motion of an infinite mass of liquid in which an elliptic cylinder is moving parallel to its major axis.

5. Show that the velocity of a free wave in water whose depth  $h$  is small compared with the wave length is  $\sqrt{gh}$  if the slope of the wave profile is gradual.

Show that on the canal theory of the tides, the moon describing a circle immediately over the canal with angular velocity  $p$ , there will be high or low water immediately under the moon according as  $h \gtrless p^2 a^2$ ,  $a$  being the radius of the earth.

6. Prove Green's theorem, viz., that in a simply connected space

$$\begin{aligned} \iiint \left( \frac{d\phi}{dx} \cdot \frac{d\psi}{dx} + \frac{d\phi}{dy} \cdot \frac{d\psi}{dy} + \frac{d\phi}{dz} \cdot \frac{d\psi}{dz} \right) dx dy dz \\ = \iint \phi \frac{d\psi}{dn} dS - \iiint \phi \nabla^2 \psi dx dy dz. \end{aligned}$$

Explain how this result is modified if  $\phi$  and  $\psi$  are not single valued functions.

7. Prove that the capacity of a cylindrical wire whose length  $l$  is large compared with its radius  $a$  is

$$\frac{l}{2 \log_e \frac{l}{a}}.$$

Prove also that if the wire is fixed horizontally at a height  $h$  above the ground, the capacity is increased by the fraction  $\log_e \frac{a}{2h}$  if  $\frac{a}{h}$  is small.

8. Show that if a circular disc of radius  $a$  is maintained at potential  $V$ , the electric density at a point on the disc at distance  $r$  from the centre is  $\frac{Vr}{2\pi^2\sqrt{a^2-r^2}}$ , and that at a point in the same plane outside the disc the potential is  $\frac{2Vr}{\pi} \tan^{-1} \frac{a}{\sqrt{r^2-a^2}}$ .

9. Sketch a proof of Fourier's integral theorem

$$\phi(x) = \frac{1}{\pi} \int_0^x d\lambda \int_{-x}^{+x} \phi(a) \cos \lambda(x-a) da,$$

indicating in what respect your proof is incomplete.

10. Prove that the differential equation of flow of heat in one direction in a bar of unlimited length which radiates heat laterally to the surroundings can be reduced in a certain supposition as to the law of radiation, to that for zero radiation.

Show that a solution of this equation for the case of an arbitrary initial distribution of temperature along the bar is

$$u = \frac{1}{\pi} \int_0^x e^{-\lambda^2 \kappa t} d\lambda \int_{-x}^{+x} \phi(a) \cos \lambda(a-x) da,$$

and that this is identical with the solution

$$u = \frac{1}{2\sqrt{\kappa \pi t}} \int_{-x}^{+x} \phi(a) e^{-\frac{(a-x)^2}{4\kappa t}} da.$$

Explain the physical significance of the latter solution.

11. The temperature in an isotropic sphere is a function of  $r$  the distance from the centre. Find the differential equation of flow of heat, and show that a particular solution is

$$v = \frac{1}{\sqrt{t^3}} e^{-r^2/4\kappa t}.$$

Hence find a solution for an initial distribution fulfilling the condition stated, and verify by any transformation you think desirable that this reduces to the initial distribution when  $t=0$ .

12. Give an account of Kelvin's theory of absolute temperature.

Sketch the experimental method of comparing this scale of temperature with that of the air thermometer, and indicate as clearly as possible its theoretical basis.

13. By means of a thermodynamic cycle or otherwise, prove that a body (e.g. a rod or wire) will be cooled or heated when suddenly stretched, according as it expands or contracts when heated under constant stress.

### THIRD PAPER—THREE HOURS.

(N.B.—Candidates are requested not to attempt more than SEVEN of the following questions.)

1. Find the differential equation of the variable flow of heat in an isotropic sphere the distribution of temperature in which is symmetrical

about the centre, on the supposition that the conductivity  $k$  is a function of the temperature  $v$ .

A hollow shell of isotropic material has conductivity  $k_0 e^{-v/c}$  where  $k_0$  and  $c$  are constants. The internal and external radii are  $a$  and  $b$ . Show that if the internal surface be maintained at temperature  $v_0$  and the external surface at temperature zero, the heat conducted across the shell in unit of time is

$$4\pi k_0 \frac{ab}{b-a} c (1 - e^{-\frac{v}{c}}).$$

2. An isotropic sphere is heated to a uniform temperature  $v_0$  and then allowed to cool in a medium of temperature zero to which the surface radiates heat according to Newton's law of cooling. Find an appropriate solution of the differential equation, on the usual supposition that the diffusivity of the substance is a constant.

Discuss the solution by successive approximation of the conditional equation which holds at the surface.

3. Define the nodal points of a thick lens, and prove that their distances from the corresponding surfaces of the lens are proportional to the radii of the surfaces. Explain how they are employed in the graphical construction of images.

An object is placed on the axis of a concave mirror beyond the focus; a plate of glass of thickness  $t$  and refractive index  $n$  is interposed between the focus and the mirror, the axis of the mirror being normal to the plate. Show that the effect of the glass on the position of the image is the same as if the mirror had been displaced through a distance  $t \left(1 - \frac{1}{n}\right)$  towards the object.

4. Plane waves of light travelling with velocity  $V$  in air fall at incidence  $i$  on a plate of refractive index  $n$ , and of thickness  $t$ . If  $r$  is the angle of refraction, show that the passage through the plate retards the waves by a time  $t(n \cos r - \cos i)/V$ .

Hence apply the principle of tautochronism of foci to show that if a small central pencil of parallel light falls at a small obliquity  $i$  on a thin lens of focal length  $f$ , the distance of the primary focus from the surface is  $(n-1)f/(n \cos r - \cos i)$ .

5. A star is viewed through a telescope, whose object glass has a focal length  $f$  and a square aperture of length  $2a$ . Show that, taking the geometrical image as origin and parallels to the sides of the square as axes, the illumination for light of wave length  $\lambda$  at a point  $(x, y)$  near to the geometrical focus is proportional to

$$\frac{f^4 \lambda^4}{x^2 y^2} \sin^2 \frac{\pi a x}{f \lambda} \sin^2 \frac{\pi a y}{f \lambda}.$$

Interpret this result, and show how to apply it in estimating the resolving power of the telescope.

6. What advantages are presented by a concave grating?

Show that if the slit is situated on the circle whose diameter is the radius through the centre of face of the grating, the spectra of different orders are all situated on the same circle.

Light from a narrow slit falls at an incidence  $\alpha$  on a plane grating at a distance  $u$  from the slit. Show that the spectra lie on the curve  $r = u \sec^2 \alpha \cos^2 \theta$ , the origin being the centre of face of the grating, and the initial line the normal to the grating.

7. Apply the principle of interference to show that the intensity of light reflected from a smoked plate of glass varies as  $\cos^2 \frac{2\pi h \cos i}{\lambda}$ , where  $h$  is the height of an irregularity,  $i$  is the angle of incidence, and  $\lambda$  the wave length of the incident light. Hence discuss the action of the plate for angles of incidence nearly equal to  $90^\circ$ .

8. Discuss the essential difference between the rotation of the plane of polarized light in quartz and magneto-optic rotation. Give differential equations representing the two cases, and solve the equations for one case completely.

9. If  $(l, m, n)$  are the direction-cosines of the wave normal in a biaxial crystal,  $v$  the velocity of propagation, and  $a, b, c$  the principal wave velocities, deduce from the electro-magnetic theory the relation

$$\frac{l^2}{v^2 - a^2} + \frac{m^2}{v^2 - b^2} + \frac{n^2}{v^2 - c^2} = 0.$$

Give an account of the singularities of the wave surface, and of the phenomena which arise from them.

10. Work out the theory of an alternating machine, the E.M.F. of which is a simple harmonic function of the time, and which has in series in its circuit a condenser and an inductive resistance. Discuss your result.

Show that in certain circumstances the amplitude of the alternating difference of potential between the terminals of the condenser may exceed that of the E.M.F. of the machine.

11. Show that the apparent mechanical forces between charged conductors can be accounted for by assuming that the dielectric is in a state of stress, which can be specified as a tension  $\frac{KR^2}{8\pi}$  along the lines of force, and an equal pressure at right angles to them,  $K$  being the specific inductive capacity, and  $R$  its electric intensity.

Show that stresses of this kind cannot be superposed like ordinary elastic stresses.

12. Show that the lines of force, and the meridian sections of the level surfaces, of a doublet at the origin, with its axis along the initial line, are represented respectively by the equations

$$r = a_1 \sin^2 \theta; \quad r^2 = a_2 \cos \theta,$$

$a_1$  being the parameter of a line of force, and  $a_2$  the parameter of a level surface.

13. Show that at the boundary of two magnetic media, the normal component of magnetic induction and the tangential component of magnetic force exhibit no discontinuity in crossing the boundary.

Prove that if a sphere of radius  $a$  and permeability  $\mu$  is introduced into a uniform field of intensity  $H$ , the magnetic field inside the sphere is constant, and of intensity  $3H/(\mu+2)$ , and that the cylindrical tube of induction which grazes the sphere has a radius  $a\sqrt{3\mu/(\mu+2)}$  at an infinite distance.

*D.—GROUP OF ENGLISH (LANGUAGE, LITERATURE,  
AND BRITISH HISTORY).*

ENGLISH LANGUAGE.

FIRST PAPER—THREE HOURS.

1. Translate the following passages :

(a) For ðý mē ðyncð bētre, gif iow swā ðyncð, ðæt wē ēac sumā bēc, ðā ðe niedbeðearfosta sien eallum monnum tō wiotonne, ðæt wē ðā ón ðæt geðiode wēnden ðe wē ealle gecnāwan mægen, and gē dón swā wē swiðe ēaðe magon mid Godes fultume, gif wē ðā stilnesse habbað, ðætte eall sio gioguð ðe nū is ón Angelcýune friora monna, ðāra ðe ðā spēda hæbben ðæt hīe ðæm befeolan mægen, sien tō liornunga oðfæste, ðā hwile ðe hīe tō nānre oðerre note ne mægen, oð ðone first ðe hīe wel cunnen Englisc gewrit ārædan : lāre món siððan furður ón Lædengeðiode ðā ðe món furðor lēran wille, and tō hierran hāde dón wille.

(b) Swā ungeliefedlic is ænigum menn þæt tō gesēcgenne, hū ænig monn mēhte swelce burg gewyrcean swelce sio wæs, oðþe eft ābrecean. Membrað se cnt angan ærest timbran Babylonia, and Ninus se cyning æfter him ; and Sameramīs his cwēn hīe geendade æfter him on middeweardum hiere rīce. Sēo burg wæs getimbred an fildum lande and on swiþe emnum, and hēo wæs swiþe fæger an tō lōcianne ; and hēo is swiþe ryhte fēowersefte ; and þæs wealles micelness and fæstness is ungeliefedlic tō sēcgenne ; þæt is, þæt hē is l ēlna brād, and ii hund ēlna hēah, and his ymbgong is hundseofontig mila and seofeða dæl ānre mile, and hē is geworht of tigelan and of eorðtyrewan ; and ymbūtan þone weall is se mæsta dīc, on þæm is iernende se ungefōglecesta strēam ; and wiðūtan þæm dice is geworht twēgea ēlna hēah weall, and būfan ðæm mārān wealle ofer ealne þone ymbgong hē is mid stānenum wiðhūsum beworht.

(c) Ðā cōm Godwine eorl, and Swegen eorl, and Harold



eorl tōgædere æt Beofres stāne, and manig mann mid him, tō ðan þæt hī woldon faran tō heora cynehlāforde, and tō þām witum eallum þe mid him gegaderode wæron, þæt hī þæs cynges ræd hæfdon and his fultum, and ealra witenas, hū hī mihton þæs cynges bismer āwrecan and ealles þeodscipes. Ðā wæron þā Wēliscan mēnn ætforan mid þām cynge, and forwrēgdon þā eorlas, þæt hī ne mōston cuman on his ēagena gesihðe; for ðan hī sædon þæt hī woldon cuman þider for þæs cynges swicdōme. Wæs þær cumen Siward eorl, and Lēofric eorl, and micel folc mid him norðan tō þām cynge; and wæs þām eorle Godwine and his sunum gecyðd þæt se cyng and þā mēnn þe mid him wæron woldon rædan on hī; and hī trymedon hī fæstlice ongēan, þēah him lāð wære þæt hī ongēan heora cynehlāford standan sceoldan. Ðā geræddon þā witan on ægðre healfe þæt man ðā ælces yfeles gewác; and geaf se cyning Godes grið and his fullne frēondscipe on ægðre healfe.

- (d) *Flōd blōde wēol (folc tō sēgon)*  
*hātan heolfre. Horn stundum sēg*  
*fūslīc f[yrd]lēoð. Fēþa eall gesæt;*  
*gesāwon ðā æfter wætere wýrmcýnnes fela,*  
*sellice sēdracan sund cunnian,*  
*swylce on næsshleoðum micras licgean,*  
*ðā on undernmæl oft bewitigað*  
*sorhfulne sið on segrāde,*  
*wýrmas and wildēor; hīe on weg hýron*  
*bitere and gebolgne, bearhtm ongēaton,*  
*gūðhorn galan. Sumne Gēata lēod*  
*of flānbogan fēores getwæfde,*  
*yðgewinnes, þæt him on aldre stōd*  
*hērestræl hearda; hē on holme wæs*  
*sundes þe sēnra ðe hyne swylt fornam.*

- (e) 'Nū ic gumena gehwæne  
 þýssa burglēoda biddan wylle,  
 randwiggendra, þæt gē recene ēow  
 fýsan tō gefeohte; syððan frymða God,  
 ārfæst Cyning, ēastan sēnde  
 leohtne leoman, berað līnde forð,  
 bord for brēostum and byrnheomas,  
 sære helmas in sceaðena gemeng,

*fyllan folctogan fāgum sweordum,  
fāge frumgāras. Fynd syndon ēowere  
gedēmed tō dēaðe and gē dōm āgon,  
tīr æt tohtan, swā ēow geƿācnod hafað  
mihƿtig Dryhten þurh mīne hand.'*

- (f) *Feala ic on þām beorge gebiden hæbbe  
wraðra wyrda: geseah ic weruda God  
þearle þenian: þýstro hæfdon  
beƿrigen mid wolcnum Wealdendes hræw,  
sārne sārman sƿeadu forðēode  
wann under wolcnum. Wēop eal gesceaft,  
cwīðdon cyninges fyll: Crīst wæs on rōde.  
Hwæðere þær fūse feorran cwōman  
æðele tō ānum; ic þæt eall behēold.*
- (g) *For þon nis þæs mōðwlcne mōnn ofer eorþan.  
ne his gifena þæs gōd, ne in geoguþe tō þæs hwæt,  
ne in his dædum tō þæs dēor, ne him his Dryhten  
tō þæs hold,  
þæt hē ā his sƿefōre sorge næbbe,  
tō hwon hine Dryhten gedōn wille.  
Ne biþ him tō hearpan hyge, ne tō hringþege,  
ne tō wīfe wynn, ne tō worulde hyht,  
ne ymbe ðwiht elles nefne ymb yða gewearc;  
ac ā hafað lƿngunge sē þe on lāgu fundað.  
Bearwas blōstmum nimað, byrig fægriað,  
wlcngas wlitig[i]að, woruld onetteð:  
ealle þā gemōniað mōdes fūsne  
sefan tō sīðe, þām þe swā þenceð,  
on flōðwegas feorr gewitan.*
- (h) *Ic am uor þe iuaid:  
þærfore ic wene beon dæd.  
fare þer ic auer fare:  
næm ich næuere bute care.  
buten ich ligge faste:  
biçlused inne castle.  
Ȝif þu þis me wult don:  
ich hit wulle mid luue a-fon.  
& ich wulle biliue;  
senden after mine wiue.  
þat is a Sexisc wimmon:*

of wisdom wel idon.  
 & after Rouwenne: mire dohter:  
 þe me is swiðe deore.  
 Þenne ich habbe mi wif:  
 & mine wine-maies.  
 & ich beo i þine londe:  
 fulliche at-stonde.  
 þa bet ich wullen hiren þe:  
 ȝif þu þis ȝettest me.

(i) Þe ȝiure glutun is þes feondes manciple. Uor he stikeð euer iðe celere, oðer iðe kuchene. His heorte is iðe disches; his þouht is al iðe neppe: his lif iðe tunne: his soule iðe crocke. Kumeð forð biuoren his louerde bismitted & bismeoruwed, a disch ine his one hond, & a scoale in his oðer: maðeleð mis wordes, & wigeleð ase uordrunken mon þet haueð imunt to uallen: bihalt his greate wombe, & te ueond lauhweð þet he to-bersteð. God þreateð þeos þus þuruh Isaie. *Servi mei comedent, et vos esurietis, &c.*: 'Mine men,' he seið, 'Schulen eten, & ou schal euer hungren!' & ȝe schulen beon ueondes fode, world a buten ende!' *Quantum glorificavit se et in deliciis fuit, tantum date ei luctum: et tormentum.* In Apocalipsi: *Contra unum poculum quod miscuit, miscete ei duo.* Ȝif þe gulchecuppe weallinde bres to drincken, & ȝeot in his wide þrote þet he aswelte wiðinnen.

(j) A welle he sekeð ðat springeð ai  
 boðe bi nigt *and* bi dai,  
 ðer-ouer he flegeð, *and* up he teð,  
 til ðat he ðe heuene seð,  
 ðurg skies sexe *and* seuene  
 til he cumeð to heuene;  
 So rigt so he cunne  
 he houeð in ðe sunne;  
 ðe sunne swideð al his fligt,  
*and* oc it makeð his egen brigt,  
 Hise feðres fallen for ðe hete,  
*and* he dun mide to ðe wete  
 Falleð in ðat welle grund,  
 ðer he wurdeð heil *and* sund,  
*and* cumeð ut al newe,  
 Ne were his bec untrew.

(k) Þeos ule þo heo þis i-herde,  
 'Havestu,' heo seide, 'i-banned ferde?  
 An wultu, wrecche, wið me fiȝte?  
 Nai, nai, navestu none miȝte.  
 Hwat gredeþ þeo þat hider come?  
 Me þuncþ þu ledest ferde to me.  
 Ȝe schule wite ar Ȝe fleo heonne,  
 Hwuch is þe strenþe of mine kunne;  
 For þeo þe haveþ bile i-hoked,  
 And clivres scharpe and wel i-croked,  
 Alle heo beoþ of mine kunrede,  
 And walde come, ȝif ich bede;  
 Þe seolfe coc, þat wel can fiȝte,  
 He mot mid me holde mid riȝte,  
 For boþe we habbeþ stevene briȝte,  
 And sitteþ under weolcne bi niȝte.'

(l) The knaue that was sumdel bold,  
 Kam him ageyn, on knes him sette,  
 And Godard ful feyre he ther grette,  
 And Godard seyde, 'What is yow?  
 Hwi grete ye and goulen nou?'  
 'For us hungreth swithe sore:—  
 Seyden [that] he wolden more,  
 'We ne haue to hete, ne we ne haue  
 Her-inne neyther knict ne knaue  
 That yeuth us drinken, ne no mete,  
 Haluendel that we moun etc.  
 Wo is us that we weren born!  
 Weilawei! nis it no korn  
 That men micte maken of bred?  
 Us hungreth, we aren ney ded.'

(m) At euesong euen neh,  
 Ydel men ȝet he seh  
 Lomen habbe an honde;  
 To hem he sayde an heh,  
 Þat suyþe he wes vndreh  
 So ydel forte stonde.  
 So hit wes bistad,  
 Þat nomon hem ne bad,  
 Huere lomes to fonde;

Anon he was by-rad,  
 To werk þat he hem lad,  
 For nyht nolde he nout wonde.

- (n) He gert [þam] blede, if þai war bolde,  
 For þare was slayne and wounded sore  
 Thretty thowsand trewly tolde,  
 Of pitaile was þare mekill more;  
 Knightes war þare wele two score  
 Þat war new dubbed to þat dance;  
 Helm and heuyd þai haue forlore,  
 Þan misliked Iohn of France.  
 More misliking was þare þen,  
 For fals treson alway þai wrought;  
 Bot fro þai met with Inglis men,  
 All þaire bargan dere þai boght.  
 Inglis men with site þam soght,  
 And hastily quit þam þaire hire,  
 And at þe last forgat þai noght,  
 Þe toun of Cane þai sett on fire.

(o) Þanne anone þe scheltroms smyte to-gedders wyþ  
 Roland hys songe, þat was bygonne in þe Normans syde  
 Þe batayl durede vram vnder of þe day to euesong tyme,  
 & nere noþer party wolde wyþ-drawe; bote þe duc hys archers  
 hadde here vorþ. Þanne þe duc made a token to hys men  
 þat hy scholde feyne to vle, and by þat wyle Englyschē men  
 were bygyled & desarayed ham, as hyt were, vor to pursywe  
 & to rese on here enymyes. Bote whanne Englyschē men  
 were so out of aray, þe Normans arayede ham efte, & tornde  
 aȝe oppon þe Englyschē men þat were out of aray, & chasede  
 ham in eueryche syde. Atte laste Harold was y-hyt wyþ an  
 arewe & loste hys on ye, & was yhurt on þe breyn, & vul  
 doun in þat plas, & on of þe knyȝtes stykede hym in þe þyȝ  
 whyle a lay þare; þare-vore William potte þat knyȝt out of  
 cheualry, vor he hadde ydo an vnkunnyngē dede.

## SECOND PAPER—THREE HOURS.

(Answer Question 1 and about two questions each from B and C.)

### A.

#### 1. Translate:

(a) Nū rāde wē on bōcum þæt man ārārde hāþengyld on  
 eallum þām fyrste ær Nōes flōde, oð þæt þā ġntas worhton

þone wundorlican stýpel æfter Nōes flōde and him swā fela gereorda æfter God þær forgeaf, swā þæra wyrhtena wæs. Ðā þā hī tōfērdon tō fyrlenum landum and mancynn þā wēox, þā wurdon hī bepæhte þurh þone ealdan dēofol þe Adam ær beswāc, swā þæt hī worhton wōhlice him godas and þone Scyppend forsægon, þe hī gesceōp tō mannum. Hī nāmon þā tō wīsdōme, þæt hī wurþodon him for godas þā sunnan and þone mōnan for heora scīnendan beorhtnesse, and him lāc offrodon and forlēton heora Scyppend. Sume mēnn ēac sædon be þām scīnendum steorran, þæt hī godas wæron and wurþodon hī georne; sume hī gelyfdon on fyr for his færlicum bryne, sume ēac on wæter, and wurþodon hī for godas, sume on þā eorþan, forþonþe hēo ealle þing āfēt. Ac hī mihton tōcnāwan, gif hī cūðon þæt gesceād, þæt se is āna God, þe hī ealle gesceōp us mannum tō bryce for his micclan gōdnesse. Ðās gescēafta dōþ, swā swā him gedihte heora Scyppend, and ne magon nāht dōn, būtan Drihtnes willan, forþonþe nān Scyppend nis, būton se āna God, and wē hine wurþiað mid gewissum gelēafan, cweðende mid mūþe and mid mōdes incundnesse, þæt se is āna God, þe ealle þing gesceōp. Gyt þā þā hæþenan noldon bēon gehealdene on swā fēawum godum, ac fēngon tō wurþigenne mislice entas and mēnn him tō godum, þā ðe mihtige wæron on woruldlicum geþingþum and egesfulle on liie, þeahþe hī leofodon fūllice.

- (b) 'Farað nū āwyrge willum bescyrede  
 engla drēamas on ēce fīr,  
 þæt wæs Sātane and his gesiðum mid,  
 dēofle gegearwad, and þære deorcan scole,  
 hāt and heorugrim, on þæt gē hrēosan sceolan.'  
 Ne magon hī þonne gehýnan heofoncyniges bibod,  
 rædum birofene, sceolon raðe feallan  
 on grimne grund, þā ær wið Gode wunnon;  
 bið þonne rices weard rēðe and mechtig  
 yrrē and egesful, andweard ne mæg  
 on þissum foldwege fēond gebīdan.  
 Swāpeð sigemēce mid þære swiðran hōnd,  
 þæt on þæt dēope dæl dēofol gefeallað,  
 in sweartne lēg synfulra hēre,  
 under foldan scēat fēge gāstas,

on wrāþra wīc wōmfulra scolū,  
 wērgē tō forwyrde on wīte-hūs,  
 dēað-sēle dēofles. Nāles Dryhtnes gemynd  
 siþþan gesēcað; synne ne āspringað,  
 þær hī leahtum fā, lēge gebundne,  
 swylt þrōwiað; bið him synn-wracu  
 andweard undyrne: þæt is ēce cwealm.

## B.

2. Write a note on the third (or mixed) class of weak verbs. Illustrate their inflexion and history.

3. Rewrite the following passage in West Saxon:

Mec se uēta uong, uundrum frēorig,  
 ob his innaðæ ærest cænd[æ].  
 Ni uuāt ic mec bizorhtæ uullan flūsūm,  
 hērum ðerh hēhcræft h[y]gid[n]cum [mīnum].  
 Uundnæ mē ni bīað uetlæ, ni ic uarp hefæ,  
 ni ðerih ðrea[t]un giðræc ðrēd mē hlīmth,  
 ne mē hrūtendum hrīsil scelfæð,  
 ni mec ou[ua]n[a] aam sceal cnyssa.  
 Uyrmas mec ni āuēfun uyndicræftum,  
 ðā ði geolu goduēbb geatum frætuath.

Point out in the above passage forms which are (a) archaic, (b) dialectal.

4. How are contracted verbs treated in inflexion in Old English? What is the cause of the variation between the dialects? Illustrate.

5. What is meant by *Umlaut*?

Illustrate the operation of the *i*-umlaut in West Saxon and point out the variations found in the dialects.

6. Analyse briefly the *normal* verse used in Old English poetry.

Criticise the following lines:

- (a) Ælfere and Maccus mōdige twēgen.
- (b) Ūrigfeōra nānig hlēomæga.
- (c) Þām oðrum þe wē ær cūðon.
- (d) Gesihð him beforan fealwe wegas.
- (e) Mundgripe mægenes swā sceal mann dōn.
- (f) Þone þe in meodu-healle mine wisse.
- (g) Mē sendon tō þē sāmenn snelle.

## C.

7. Is it correct to call *Beowulf* a 'pagan' poem?
8. Give the substance of Bede's account of Caedmon. Refer briefly to some of the major controversies associated with his name.
9. Write a note on the *Seafarer* as a poem. What is Rieger's theory as to its form?
10. Compare *Juliana* and *The Wohunge of ure Lauerd* as the expression of the religious sentiments of Middle English times. Is either related to the religious sentiment in any Old English poetry you have read?
11. Discuss the qualities of any Middle English Romance you have read.

## ENGLISH LITERATURE.

## FIRST PAPER—THREE HOURS.

1. Estimate the influence of Boethius on English Literature up to the time of Chaucer.
2. To what extent were Old and Middle English Literature independent of the Church?
3. "Chaucer represents the French and Latin spirit, as Langland represents the Teutonic." Discuss this statement; and show how far later English writers can be assigned to the one party or the other.
4. "All romance is a revival, and a new reading of what, in its own age, was not romantic." Test this statement by examples from English literature.
5. What claim has Henryson to be regarded as the most Chaucerian of Scottish poets?
6. Give some account of the anonymous literature of the fifteenth century.
7. In what ways were the Renaissance and the Reformation hostile to allegory?
8. Estimate the influence of Caxton on the later history of English literature.
9. Write a brief account of English poetry (exclusive of the drama) from Surrey to Spenser.
10. Give some account *either* of the writers of English Chronicle histories *or* of the translators of the Bible before the time of Shakespeare; and estimate their influence on English literature.
11. Discuss Spenser's work as a satirist.



12. How far does the *Faerie Queene* embody personal reminiscences and impressions?

13. What is the importance in the history of English literature of the following writers: Sir Thomas North; Richard Hakluyt; William Painter?

14. Which are the most notable of the works occasioned by religious controversy in England before the time of Hooker? Briefly state the main position of the *Ecclesiastical Polity*.

## SECOND PAPER—THREE HOURS.

1. Give some account of the chief features of neo-classic literature in the seventeenth century.

2. Trace the rise of journalism in the seventeenth century, and show how it affected literature.

3. Account for the rapid decay of English drama in the seventeenth century and comment upon some of the characteristics of the theatre under Charles II.

4. Illustrate the dominating power of philosophy in the prose literature of the eighteenth century.

5. Discuss the relations of Gray, Cowper and Blake respectively to the romantic revival.

6. Give some account of three famous letter-writers of the eighteenth century.

7. Discuss the points of similarity between the political and social creeds of Milton and Shelley.

8. Show your acquaintance with the more famous literary controversies between 1750 and 1800.

9. Show what part was played in the romantic revival by the study of Shakespeare and the Elizabethans.

10. Discuss the use of mediæval material made by Coleridge, Keats and Rossetti.

## SHAKESPEARE.

### FIRST PAPER—THREE HOURS.

1. On what basis of authority do the following commonly narrated incidents of the life of Shakespeare severally rest: The Deer-stealing story; the Horse-holding story; the merry meeting with Drayton and Ben Jonson? Discuss the truth of these traditions.

2. Give some account of the historical plays written before Shakespeare's, and estimate his debt to them.

3. What contemporary references are there to the story of *Hamlet*? In what different forms is the play found? What theory seems to you best to explain the facts?

4. What allusions are there in Shakespeare's plays to contemporary political events?

5. State briefly the arguments whereby a date has been assigned to the composition of each of the following plays: *Macbeth*; *Antony and Cleopatra*; *The Tempest*.

6. Give a broad and general account of those changes in Shakespeare's style which distinguish his early, middle, and late plays.

7. What evidence is there that Shakespeare collaborated with other dramatists?

8. Write full notes on *three* of the following passages:

- (i) Her gentlewomen, like the Nereides,  
So many mermaids, tended her i' the eyes,  
And made their bends adornings.
- (ii) Now the gods keep you old enough, that you may live  
Only in bone, that none may look on you!
- (iii) And my poor fool is hang'd.
- (iv) If the midnight bell  
Did, with his iron tongue and brazen mouth,  
Sound on into the drowsy race of night.
- (v) If trembling I inhabit then, protest me  
The baby of a girl.
- (vi) Be she as foul as was Florentius' love.
- (vii) That runaways eyes may wink.

9. Write a full note on Shakespeare's vocabulary, or discuss his use of prose.

## SECOND PAPER—THREE HOURS.

1. Write a criticism of one of Shakespeare's narrative poems.

2. "Shakespeare is merciless to idealists." Discuss this statement.

3. How does Shakespeare modify the original story in each of the following plays: *King John*; *King Lear*; *Measure for Measure*. Discuss his alterations.

4. What principal faults are attributed to Shakespeare by Pope and Johnson; and with what justice?

5. Give examples of mixed metaphors in Shakespeare. Can they be defended?

6. "Shakespeare wanted art." Discuss.

7. Which, in your opinion, is the most profoundly tragical of Shakespeare's plays; and why?

8. Write a short essay on Shakespeare's ghosts.

9. What is meant by "tragic irony"? Refer to examples of it in Shakespeare.

## MILTON—THREE HOURS.

1. Give some account of Milton's poems written on purely personal themes, or addressed to persons.
2. Write a brief history of the composition of *Paradise Lost*.
3. Summarise Milton's views on Government.
4. "Milton's prose is the prose of a poet." Discuss.
5. How far has Milton explicitly set forth his theory of poetry and of metre? Illustrate his mastery of metrical effect from *L'Allegro*, *Il Penseroso*, and *Samson Agonistes*.
6. What inferences can be drawn from the longer poems as to the extent and nature of Milton's reading?
7. In what ways does Milton in *Paradise Lost* supplement his Biblical sources? What is the Biblical, and what the extra-Biblical, authority for the Fall of the Angels?
8. Discuss Milton's use of simile.
9. Write full notes on *three* of the following passages :
  - (i) Return, Alpheus, the dread voice is past  
That shrunk thy streams.
  - (ii)                   There is a place,  
(If ancient and prophetic fame in heav'n  
Err not), another world, the happy seat  
Of some new race call'd Man.
  - (iii) They pass the planets seven, and pass the fix'd,  
And that crystalline sphere whose balance weighs  
The trepidation talk'd, and that first moved.
  - (iv) Your plots and packing worse than those of Trent.
  - (v) They hand in hand with wand'ring steps and slow  
Through Eden took their solitary way.
  - (v) Sabrina is her name, a virgin pure ;  
Whilome she was the daughter of Loecrine,  
That had the sceptre from his father Brute.

## WORDSWORTH—THREE HOURS.

1. Give a succinct account of Wordsworth's relations with Coleridge. Estimate the latter's influence upon Wordsworth's poetry.
2. Examine the charge of apostasy made against Wordsworth. What was his own line of defence?
3. Sketch briefly Wordsworth's own theory of poetry. How is it criticised by Coleridge?

4. Discuss *two* of the following :
  - (a) "I find *Laodameia* not wholly free from something artificial, and the great Ode not wholly free from something declamatory."
  - (b) "A new Cowper with less talent and more ideas."
  - (c) "Of all English poems his works are the most completely outside the sphere of Shakespeare's universal genius."
5. How does the nature poetry of Wordsworth differ from that of his contemporaries?
6. Write a brief introduction to the *Prelude*.
7. Illustrate and discuss the pathos of Wordsworth.
8. "Wordsworth resolutely held aloof from heroic subjects; he seemed to find human nature most interesting in its weak and poor and often miserable estate." Illustrate and examine this remark.
9. Quote and criticise some of the poems of Wordsworth which appeal to you most.

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## BRITISH HISTORY.

### FIRST PAPER—TWO HOURS.

1. What is the place of Wiclif in English political theory?
2. Write a description of English politics in the later Lancastrian period.
3. Trace the change in the spirit of English policy towards France, from Henry V. to Henry VIII. (inclusive).
4. Examine the secular importance of the English Reformation.
5. What progress towards the unity of Britain was made by the Tudors?
6. What determined Elizabeth's treatment of her Catholic subjects?
7. Was the reign of Edward VI. a period of "government by pedants and cheats"?
8. "A study of the Tudor administration must be primarily political; and only in the second place constitutional." Do you agree?

### SECOND PAPER—TWO HOURS.

1. Compare the religious ideals and political principles expressed by Langland and Latimer.
2. Can you regard the *Utopia* as a practical study of Sixteenth Century Nationalism?
3. Compare the pictures of society given by Langland, and by More in the *Utopia*.
4. What were the historical antecedents of Elizabethan Puritanism?
5. Discuss Hooker's attitude to the Church of Rome.
6. Is it true to say that Hooker destroyed the arguments of the Puritans, but could not answer their grievances?

*E.—GROUP OF MODERN LANGUAGES.*

## FRENCH LANGUAGE AND LITERATURE.

## FIRST PAPER—THREE HOURS.

## 1. Traduire en anglais :

Les œuvres de l'esprit humain, comme celles de la nature, sont d'une contemplation infinie. La nature est sans bornes pour le savant et pour l'artiste. Que ne s'est-elle pas laissée dérober depuis que l'humanité, sortie de ses langes, s'essaye à découvrir les lois dont la régularité gouverne l'univers, ou à reproduire, d'une voix et d'un pinceau mortels, les immortelles beautés qui se confondent ou se contrarient dans l'ensemble immense ! Quand le physicien et le poète, sur le bord de l'océan, assistent à ce grand spectacle d'une eau qui mystérieusement se gonfle et s'abaisse, l'un, tournant les yeux vers le ciel, y reconnaît les deux puissants moteurs qui, en passant, soulèvent les flots hors de leur lit, puis, les laissent retomber comme un fardeau trop lourd ; l'autre, à l'aspect de cette grandeur, sent le ravissement de la rive solitaire et de la mer profonde, et entend la musique de la vague bruyante, comme l'entendit Childe Harold en ces vers qui sont dans la mémoire de tous ; et l'âme va s'anéantir dans la douloureuse volupté de l'infini aussi bien avec la sévère spéculation qui l'éclaire qu'avec l'harmonieuse rêverie qui la charme.

## 2. Traduire en français :

A late lark twitters from the quiet skies ;  
 And from the west,  
 Where the sun, his day's work ended,  
 Lingers as in content,  
 There falls on the old, grey city  
 An influence luminous and serene,  
 A shining peace.  
 The smoke ascends  
 In a rosy-and-golden haze. The spires  
 Shine, and are changed. In the valley  
 Shadows rise. The lark sings on. The sun,  
 Closing his benediction,  
 Sinks, and the darkening air  
 Thrills with a sense of the triumphing night—  
 Night with her train of stars  
 And her great gift of sleep.  
 So be my passing !  
 My task accomplished and the long day done,  
 My wages taken, and in my heart  
 Some late lark singing,  
 Let me be gathered to the quiet west,  
 The sundown splendid and serene,  
 Death.

W. E. HENLEY.

## SECOND PAPER—THREE HOURS.

## 1. Translate into Modern French :

- (a) Ço sent Rodlanz que la mort fort l'argudet.  
 Met sei sour piez, quant qu'il puet s'esvertudet ;  
 En son visage sa color at perdue.  
 Tient Durendal s'espede tote nude :  
 Dedevant lui at une piedre brune,  
 Dis cols i fiert par dueil e par rancune :  
 Croist li aciers, ne fraint ne ne s'esgrumet ;  
 E dist li coms : " Sainte Marie, aide !  
 E ! Durendal, bone, si mare fustes !"  
 Quant jo mei pert, de vos nen ai mais eure.  
 Tantes batailles en champ en ai vengudes,  
 E tantes terres larges escombatudes,  
 Que Charles tient qui la barbe at chemide !  
 A mon vivant ne me serez tolude.  
 Ne vos ait om qui por altre s'en fuiet !  
 Molt bon vassals vos at lonc tems tenude :  
 Ja mais n'iert tels en France l'assolude."

*Chanson de Roland.*

2. Choisir douze mots dans le passage ci-dessus et en expliquer la forme, la fonction et le sens.

3. Traduire en français moderne et commenter, au point de vue philologique, le passage suivant :

Quant la vigile fu chantée  
 Et ce vint a la matinee,  
 Le cors portèrent enterrer.  
 Mais ainz l'orent fait enserrer  
 En un mont bel vaissel de plon ;  
 Onques plus bel ne vit nus on.  
 Puis l'enfoient soz un arbre,  
 Et par dessus mirent un marbre,  
 S'i ont escrit le nom la dame  
 Et sa vie, et comandent l'ame.  
 Ne sai a cisel o a grafe  
 I ont escrit en l'epitafe :  
 Dessoz cest arbre, en mi ce plain,  
 Gist copee, la suer pintain.  
 Renarz, qui chascun jor empire,  
 En list as denz si grant martire.

*Roman de Renard.*

4. Qu'entend-on par Roman de Renard ?

## THIRD PAPER—THREE HOURS.

1. Période spéciale de l'histoire de la littérature française.

Traiter aussi complètement que possible l'un des sujets suivants :

(a) Exposer quelques-unes des idées maîtresses et originales de Madame de Staël sur la littérature.

(b) Indiquer et expliquer les rapprochements que fait S<sup>te</sup> Beuve entre Corneille, Racine, Boileau, La Fontaine et Molière dans son article intitulé : "Aimer Molière."

(c) Caractériser l'œuvre de Guizot historien.

(d) Unité de la vie et de l'œuvre d'Augustin Thierry ; quelle est sa place parmi les grands historiens du xix<sup>e</sup> siècle ?

(e) Exposer les idées de Rousseau sur les spectacles, et les rattacher à "son système."

## 2. Histoire générale.

Répondre brièvement aux questions suivantes :

(a) Quels sont les principaux cycles de l'épopée française ? En indiquer les œuvres capitales.

(b) Quels furent les poètes de La Pléiade ? Quel fut leur manifeste et que contenait-il ?

(c) Quelle fut l'occasion des Provinciales ? ces lettres ont-elles encore un intérêt littéraire ?

## GERMAN.

### FIRST PAPER—THREE HOURS.

#### 1. Translate into Modern German :

(a) Man zôch in mit dem vlize, als im daz wol gezam.  
von sin selbes mnote waz tugende er an sich nam !  
des wurden sit gezieret sines vater lant,  
daz mán in ze allen dingen só réhte hêrlichen vant.

Vil selten âne huote man riten lie daz kint.  
in hiez mit kleidern zieren Sigmunt und Sigelint.  
sin pflâgen ouch die wisen, den êre was bekant.  
des mohte er wol gewinnin beidiu liute ûnde lant.

Der wirt der bat ez lâzen ; dô zôch mán diu marc.  
man sach ouch dâ zebrochen vil manege buckel stare,  
vil der edelen steine gevellet ûf daz gras  
ab liehten schildes spangen : von hurten daz gescehen was.

Vil lûtzel man der varnden ârmén dâ vant.  
röss ûnde kleider daz stoup in von der hant,  
sam si ze lebene hêten niht mêr deheinen tac.  
ich wien, ie ingesinde só grôzer miltê geptlac.

Er sprach zûo dem kûnege „ine hân iu niht verseit.  
ich sol iu helfen wenden elliu iuwer leit.  
welt ir vriwent sûochen, der sol ich einer sîn  
unt trouw ez wol volbringen mit êren an daz ende min.“

„Nu lône iu got, her Sivrit;     diu rede mich dunket guot.  
 unde ob mir nimmer helfe     iwer éllén getuot,  
 ich freu mich doch der mære,     daz ir mir sit sô holt.  
 leb ich deheine wile,     ez wîrdet umb iuch wol versolt.

Si hiezen daz gewafen     wider sôumen an den Rîn.  
 ez hête wol geworben     mit den helden sîn  
 Sivrit der recke,     der hêt ez guot getân,  
 des im iehen muosen     alle Gûnthêres man.

*Nibelungenlied.*

(b)

‘waz solte uns lip unde guot,  
 waz solte uns werltlich muot,  
 swenne wir dîn enbæren?  
 dune . . . . .  
 jâ soltû, liebin tohter min,  
 unser beider fröude sîn,  
 gar unsers libes wûne,  
 ein bluome in dîme künne,  
 unsers alters ein stap.  
 und lâstû uns über dîn grap  
 gestên von dinen schulden,  
 dû muost von gotes hulden  
 iemer sîn gescheiden:  
 daz koufest an uns beiden.’  
 wiltu uns tohter wesen guot,  
 sô soltû rede und den muot  
 durch unsers herren hulde lân,  
 die ich von dir vernomen hân.

Nu vernam er daz si wære  
 genuog unwandelbare,  
 und fuorte si wider dan  
 hin zuo dem siechen man  
 und sprach zuo ir herren  
 ‘uns kan daz niht gewerren,  
 iawer maget ensi vollen guot.  
 nû hânt frölichen muot:  
 ich mache iuch schiere gesunt.’  
 hin fuorte er si zestunt  
 in sîn heimlich gemach,  
 da es ir herre niht ensach,  
 und beslôz im vor die tûr  
 und warf einen rigel für:  
 er enwolte in niht sehen lân  
 wie ir ende solte ergân.

2. Translate:

HARTMANN VON AUE.

Sit got ein rehter rihter heizet an den buochen,  
 sô wære, er solt ûz sîner milte des geruochen,  
 daz er die gar getriuwen ûz den valschen hieze suochen;  
 joch meine ich hie: si werdent dort vil gar gesundert.



doch sæhe ich an ir etesllichem gerne ein schanden mâl.  
 der sich mir windet ûz der hant reht als ein âl,  
 ôwê daz got niht zorneclichen sêre an deme wundert !  
 swer saint mir var von hûs, der var ouch mit mir hein :  
 des mannes muot sol veste sin alsûn ein stein,  
 âf triuwe sleht und eben als ein vil wol gemachter zein.

WALTHER VON DER VOGELWEIDE.

## II. GRAMMAR.

(Answer NINE questions ; FOUR from group A and FIVE from group B, of which question NINE must be one.)

### A.

1. Write a short account of the Sagen during the *Völkerwanderung*.
2. To which legendary cycle does the *Hildebrandslied* belong? Give its contents.
3. Describe the condition of literature in Germany during the tenth century.
4. Discuss Lachmann's theory upon the original components of the *Nibelungenlied*.
5. Sketch the early history of the Drama in Germany. How do you account for its slow development, as compared with the English Drama?
6. What important influences had the work of *Paul Gerhardt* and *Andreas Gryphius* upon the literature?

### B.

7. Describe the efforts made in the seventeenth century to preserve the purity of the language.
8. Contrast the genius of Schiller with that of Goethe.
9. What, according to Carlyle, are Schiller's defects?
10. Trace the history of the Romantic movement to the death of Novalis.
11. In what special way did Tieck influence its development?
12. Write a life of Platen, and discuss his connection with the Romanticists, especially with Immermann.

## SECOND PAPER—THREE HOURS.

### I.

(FOUR questions to be answered ; ONE at least from each section, and not more than TWO from any one section.)

### A.

1. Schildern Sie die Bedeutung Hartmanns für die deutsche Literatur.

2. "Walther von der Vogelweide ist der bedeutendste und vielseitigste unter allen höfischen Lyrikern." Besprechen Sie diesen Ausspruch.

3. Worin bestehen die Verdienste von Opitz?

B.

4. Schreiben Sie eine kurze Skizze über das Volkslied.

5. Schildern Sie den Spaziergang vor dem Thor in Goethes Faust.

6. Begründung des Ausspruchs: Die Faustdichtung war das Werk von Goethes Leben.

C.

7. Entwickeln Sie die verschiedenen Stufen der Romantik.

8. Worin besteht die Bedeutung der Tätigkeit Tiecks?

9. Welchen Einfluss hatten die politischen Verhältnisse auf Körner?

II.

Translate into English:

Wenn das wahre Königsgericht die Erinnerung des Volkes ist, das Angedenken im Segen oder im Fluch an die, die seine Geschicke so oder so bestimmt haben, wenn der lang nachzitternde Schauer oder der nachdauernde Hohn den schlechten, das rasche Vergessenwerden den geringen Herrscher kennzeichnet, so ist es wohl eine Tatsache, die zu denken gibt, dass unter all den Gliedern unseres königlichen Hauses nächst dem Gewaltigen des Herrn, der auch uns noch der alte Fritz ist, kein Name so populär ist, keines Verstorbenen Gedächtnistage so im stillen Innern der vielen begangen werden, wie der Name und die Tage der Königin Luise. Es ist das eines unserer Vorrechte, ein Vorrecht derjenigen preussischen Landesteile, welche den schwarzen Adler auch flügelahm gekannt, welche die schwere Schule des Leidens, das stolze Bewusstsein der Selbsthilfe mit durchgemacht haben, gegenüber den jüngeren Gliedern unseres volkseinenen Staates; ein Vorrecht aber vor allem gegenüber den anderen Nationen. Unter den zahlreichen Königinnen, welche mit und nach der Königin Luise gekommen und gegangen sind, ist keine zweite, die also noch in lebendiger Erinnerung fortlebte. Kunstvolle Fürstengräber gibt es auch anderswo; aber das Mausoleum in Charlottenburg ist doch nicht bloss einzig durch Rauchs Meisterwerk, sondern ebenso sehr durch die Pietät der ewigen Totenfeier treuer Volksliebe uns wert.

MOMMSEN.

THIRD PAPER—THREE HOURS.

I.

1. Translate into English:

Ihr Instrumente freilich spottet mein,  
Mit Rad und Kämmen, Walz' und Bügel.  
Ich stand am Thor, ihr solltet Schlüssel sein;  
Zwar euer Bart ist kraus, doch hebt ihr nicht die Riegel.  
Geheimnisvoll am lichten Tag,

Läszt sich Natnr des Schleiers nicht berauben,  
 Und was sie deinem Geist nicht offenbaren mag,  
 Das zwingst du ihr nicht ab mit Hebeln und mit Schrauben.  
 Du alt Gerathe das ich nicht gebraucht,  
 Du stehst nur hier weil dich mein Vater brauchte.  
 Du alte Rolle, du wirst angeraucht,  
 So lang an diesem Pult die trübe Lampe schmauchte.  
 Weit besser hätt' ich doch mein Weniges verpraszt,  
 Als mit dem Wenigen belastet hier zu schwitzen !  
 Was du ererbt von deinen Vätern hast,  
 Erwirb es, um es zu besitzen !  
 Was man nicht nützt ist eine schwere Last ;  
 Nur was der Augenblick erschafft das kann er nützen.

Faust.

2. Explain the following words and expressions: ein fahrender Scholasticus; Salomonis Schlüssel; Juristerei; Übermensch; heisse Magister, heisse Doktor; Brudersphären.

3. When was the *Vorspiel auf dem Theater* written? Give a summary of its contents.

4. In what respects does the *Fragment* differ from the *Urfaust*?

5. Translate :

- (a) Unpstendig sind all yrdisch gab :  
 Grúncz heut, so nembt es morgen ab.  
 Was flaisch und pluett duett geben,  
 Pestet nit lang,  
 Nembt sein ausgang  
 Sambt dem zeitlichen leben.  
 Drumb, mensch, secz dein hercz, sin und muett  
 Nit auf zeitlich frewd, er und guet,  
 Sunder auf gotes reiche !  
 Das nit verget,  
 Sinder pestet  
 Ymer und ewicleiche.

SACHS.

- (b) Die Sonn het auch jr freud damit,  
 Das so dapffer das Schiff fortschritt,  
 Und schin so hell inn dRüder rinnen,  
 Das sie von fern wie Spiegel schinen.  
 Das Gestad schertzt auch mit dem Schiff,  
 Wann das wasser dem land zuließ,  
 Dann es gab einen widerthon,  
 Gleich wie die Rhüder thäten gon.  
 Ein Flut die ander trib so gschwind,  
 Das sie ein vnderm gsicht verschwind.

FISCHART.

6. Translate into German :

The crowd at the desk where books are given out is largely composed of young people, a hopeful sign if only it meant that they would come

as eagerly when they are ten years older. But where is the serious student, who knows how to use a library, and resorts to it with definite ideas of what he wants? If they are few, it may be said with truth that genuine students are few anywhere. But unless public libraries add to their number and improve their quality they are failing to attain the main end for which they exist. For of all modern superstitions, the idea that reading is good in itself, irrespective of what is read or how it is read, is surely the most baseless, and libraries exist, not to encourage this futile industry, but to save us from it. There are, moreover, many ways of doing this, which will be regularly utilised as soon as the art of library administration is systematised more thoroughly. In the first place, all the libraries in a single area should be treated as different members of one great organisation which aims at putting the student in a position where he can study and command different fields of knowledge.

## II. HISTORICAL GRAMMAR.

(Answer SIX of the following questions.)

1. Explain and illustrate the changes which determined the independence of the Teutonic tongue.
2. What are the broad differences between the first and second sound-shifting?
3. How can we determine approximately the period when such words as *Pein* and *Pfau* were adopted in German?
4. What was the force of the prefix *ge-* in Middle High German? Was there any class of verbs without this prefix?
5. Discuss the different ways in which negation was expressed in Middle High German.
6. What systematic changes have the vowels undergone since the thirteenth century?
7. Give examples of the various *Ablaut-Series* in Middle High German.
8. Explain the process of *Brechung*. Discuss the meaning of *Rück-umlaut*.

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## F.—GROUP OF ECONOMIC SCIENCE.

### POLITICAL ECONOMY.

#### FIRST PAPER—THREE HOURS.

(Not more than SIX questions to be attempted.)

1. "Recent (economic) history presents a parallel with that of the sixteenth century." Develop this along the lines suggested by Cunningham.
2. What were Ricardo's contributions to economic theory?

3. Give some account of the depression of the Landed Interest in the nineteenth century.

4. Describe the part played by privileged Companies in the development of British commerce.

5. "Confiscating land will not do away with rent, nor make the law of rent less true." Comment.

6. Is there any natural alliance between Cooperators and Trade Unionists?

7. Mention a few events in English economic history which may be called "revolutionary," and give details of one or two.

8. What grounds are there for calling Political Economy a "Science"?

### SECOND PAPER—THREE HOURS.

*(Not more than SIX questions to be attempted.)*

1. Criticise the building of houses for the poor by municipalities.

2. Discuss the proposals for the state regulation of railway rates.

3. "The income tax is our only war reserve." "It is imperative that we should broaden the basis of taxation." Comment.

4. "Experience is showing us how utterly fallacious was the old doctrine of the territorial division of commercial operations." Examine.

5. Criticise the alleged parallel between Trade Unionism and Protection.

6. "Home Trade employs two capitals; Foreign, only one." Criticise.

7. Has any practical scheme of Retaliation been presented?

8. What principles are involved in the imposition of Poor Rates?

### THIRD PAPER—THREE HOURS.

*(Not more than THREE questions to be attempted.)*

1. What principles should govern municipal borrowing?

2. Describe the contributions of Bentham and Chadwick to poor law reform.

3. What are the objections to grants in aid?

4. "The liberty to do wrong is not a right, but the perversion of a right and its negation." Expand and illustrate.

5. Discuss "the right to work."

6. "States once had national treasures: now they have national debts." Is the theory of the State any clearer in consequence?

## III.—FOR DEGREE OF B.Sc.

## A.—IN PURE SCIENCE.

## FIRST EXAMINATION.

MATHEMATICS—See pp. 573-576.

NATURAL PHILOSOPHY—See pp. 576-580.

CHEMISTRY—See pp. 582, 583.

BOTANY—See p. 583.

ZOOLOGY—See p. 685.

## FINAL EXAMINATION.

MATHEMATICS—See pp. 597-603.

NATURAL PHILOSOPHY—See pp. 603-610.

## ASTRONOMY.

## FIRST PAPER—ONE HOUR AND A HALF.

(One of each number to be attempted first.)

1*a*. Draw a diagram of the celestial sphere for a place at latitude  $10^\circ$ , sidereal time 6 hours. Show the ecliptic and lunar orbit (longitude of node =  $90^\circ$ ) and the geocentric position of the moon at hour angle  $45^\circ$ . What are the right-ascension, declination, longitude, latitude, azimuth and zenith distance of the geocentric position of the moon? (Rough estimates.)

1*b*. Same diagram as 1*a*. Enter the position of the sun on March 21. (a) What is the phase of the moon? (b) What is the apparent solar time? (c) What is the longitude and latitude of place X on the earth where the moon stands overhead?

2*a*. How is the right-ascension of a star determined?

2*b*. Derive the formulæ by which the Greenwich Mean Time of setting of the moon can be calculated with regard to mean refraction ( $35'$ ) and mean parallax ( $57'$ ).

3*a*. Draw a diagram of the celestial sphere by means of which the relation between Greenwich Mean Time and local sidereal time can be derived.

3*b*. Show on the Greenwich celestial sphere the arc which measures sidereal time at Greenwich mean noon. Find the sidereal time at local noon for a place of longitude  $\lambda$ .

4*a*. Assuming the celestial sphere round the earth's centre to be stationary and the meridian of a place at the earth's equator to move, draw on a large scale the ecliptics and mean and true equators at times

$t_0$  and  $t_1$ . Enter for both epochs the position of the perihelion, taking its motion into account, and at time  $t_1$  the position of the dynamical mean sun and the astronomical mean sun. Show that the position of the latter can be fixed by known quantities ( $\alpha$ ) with reference to the true vernal point, ( $\beta$ ) relatively to the sun. [Derive no formulae except those which can be read off the diagram.] Why is sidereal time not rigorously uniform?

4b. Define the mean longitude of the sun and mean tropical motion of the sun in a mean solar day. Of what three quantities does the latter consist?

5a. Express the change of hour-angle  $\tau$  of the moon per unit change of the hour-angle  $\theta$  of the vernal point by the variation of the moon's right-ascension, and find the sidereal time of transit over the meridian of the moon's semi-diameter  $s$ .

5b. Draw the celestial sphere for latitude  $30^\circ$ . Enter the true position of a star,  $\alpha = 90^\circ$ ,  $\delta = 30^\circ$ , at culmination. During what months is the star observed with the transit instrument south of the zenith, and during what months north of the zenith.

6a. Prove that a level must be reversed on the line whose inclination to the horizon is to be determined.

6b. The altitude of the sun has been measured with a theodolite and the position of the horizontal circle has been read. Show that the meridian can be found from the observation, the known latitude and a datum given in the *Nautical Almanac*.

## SECOND PAPER--ONE HOUR AND A HALF.

(ONE of each number to be attempted first.)

1a. Draw the celestial sphere round centre of earth showing ecliptics and both mean and true equators at two epochs  $t_1$  and  $t_2$ . Point out ( $\alpha$ ) the arc which is expressed by a series in the theory of Precession and Nutation, ( $\beta$ ) the points which are called mean and true equinoxes at  $t_1$  and  $t_2$ , ( $\gamma$ ) the arcs  $m(t_2 - t_1)$  and  $n(t_2 - t_1)$  which are used in the reduction of star observations, ( $\delta$ ) what quantities are determined from observations and from what kind of observations?

1b. Explain why the right-ascension of a star obtained from a transit observation refers to the true equinox and belongs to the apparent place of the star.

2a. The azimuth and zenith distance of the limb of the moon  $M'$  have been observed. ( $\alpha$ ) Show in a diagram the position corrected for refraction, the position of the centre  $M$ , the position  $M_c$  at the centre of the earth. ( $\beta$ ) The local sidereal time being known say how the geocentric right-ascension and declination of the moon can be found. ( $\gamma$ ) How is aberration taken into account? ( $\delta$ ) To what equinox do the coordinates belong?

2b. The transits of a star have been observed at different seasons of the year and at an interval of 100 years. The proper motion of the star

is wanted. What reductions have to be applied to the observations? Why is it immaterial at what place on the earth the observations are made?

3a. Derive the angular distance of the geocentric and heliocentric positions of a star at finite distance.

3b. The parallaxes of moon and sun are  $57'$  and  $8.8''$ . Find the ratio of the distances earth—sun and earth—moon and the time in which light travels from moon to earth.

4a. Enter on the local celestial sphere the section of the shadow cone thrown by the earth and the position of the moon relatively to it when the eclipse of the moon begins and when the moon is in geocentric opposition to the sun. What is the diameter of the section of the shadow cone?

4b. Draw a celestial sphere round the moon containing the ecliptic, the lunar orbit and the lunar equator. Enter the position of the apparent centre of the lunar disc as seen from a place  $O$  and the point on the equator of the lunar surface which defines the first meridian. Point out the arc which measures optical libration.

5a. Explain the fundamental principles of the method by which the time of disappearance of a star behind the moon can be calculated. Illustrate by diagrams.

5b. On the celestial sphere described round Jupiter enter the earth's equator with vernal point and Jupiter's equator. The local right-ascension  $\alpha$  and declination  $\delta$  of Jupiter being given enter the position of the earth  $E$ . Show by a diagram that the spherical angle at  $E$  inclosed between great circles  $E$ —Pole of Jupiter and  $E$ —Pole of Earth is the position angle of Jupiter's pole on the celestial sphere described round the earth.

### THIRD PAPER—Two Hours.

(Not more than NINE questions to be attempted. First FOUR questions to belong to different numbers.)

1a. Let  $f(c+nu) = f(c) + nf'(c) + \frac{n^2}{2}f''(c) + \frac{n(n^2-1)}{3}f'''(c)$  converge for values of  $n$  smaller than 1. Derive a formula of mechanical quadrature which gives the integral for the limits  $n = -\frac{1}{2}$ , and  $n = \frac{1}{2}$ ,  $i$  any integer.

1b. The function  $f(a) = \int_0^{\frac{1}{2}} \cos(a \cos \phi) d\phi$  is to be calculated. How would you proceed?

2a.  $r/a = 1 - e \cos E$  and  $E - e \sin E = M$ .  $r/a$  is to be developed into a series depending on angle  $M$ . What is the form of the series and merely say how the coefficients are determined?

2b. Prove that a force function exists in the problem of  $n$  bodies. Point out in one sentence some of the advantages which belong to a problem with a force function.



3a. Rotation.  $A\dot{p} - qBr - rCq = L$  etc.,  $A\dot{p} - qBr + (R_0 + r)Cq = L$  etc. For the second set of equations the system of coordinates moves independently of the body and a certain assumption has been made of which the first set is free. What is this assumption?  $pqr$  determine the axis of rotation. Clearly state what is meant by axis of rotation and whether there is a difference between it and the axis of rotation of the body. To what system of coordinates does  $L$  refer and what is the difference between the  $L$  etc. of the two sets? Why does  $p$  and  $q$  determine the precession in both cases?

3b. In the theory of precession the integrals of the equations

$$A\dot{p} - qBr + (R_0 + r)q = L \text{ etc. are } q = a + bn \cos 2l + cn \cos 2\Lambda + \dots \text{ etc.,}$$

in which  $a, b, c$  are constants,  $n$  the mean motion of the moon,  $l$  the mean longitude of the moon and  $\Lambda$  the longitude of the node of its orbit. Find the principal term of nutation.

4a. Let there be two attracting masses and assume motion to be in a plane. (a) Find from first principles the differential equations for rectangular coordinates  $x$  and  $y$ . (b) Applying Lagrange's equations find the differential equations for polar coordinates  $r$  and  $u$ .

4b. Motion of a mass in a plane round a central mass. Let the force function be  $k^2m(1+m)r^{-1}$ . Derive  $H(qp)$  where  $q_1$  and  $q_2$  represent the polar coordinates  $r$  and  $u$ , find Hamilton's partial differential equation for  $S$  and hence the equations of the equations of motion. Do not carry out the quadratures.

5a. Derive from the canonic equations Hamilton's partial differential equation of  $S$ .

5b. Give the principal points of Hamilton-Jacobi's method. Define canonic coordinates and mention the salient advantage which such coordinates offer in problems which can be solved only by successive approximation.

6a. Prove that the kinetic energy of a solid body with reference to its centre of inertia is given by  $T = \frac{1}{2}(A\dot{p}^2 + B\dot{q}^2 + C\dot{r}^2)$ .

6b. The first equations given under 3a can be integrated if there is no perturbing mass. The integral is  $\psi = \beta_1 \cos \epsilon = c\alpha_1$  in which  $\psi$  designates the longitude of the node of the equator with reference to the ecliptic counted from an arbitrary zero,  $\epsilon$  the inclination of the equator to the ecliptic,  $c$  a constant, and  $\alpha_1\beta_1$  the canonic constants of integration. The force function belonging to a perturbing mass  $m'$  equals  $f(\rho) + m'F(\rho z)$ ,  $\rho$  being the distance of  $m'$  from the centre of inertia and  $z$  its coordinate referred to the axis of rotation. Write out the differential equations of precession and nutation using the variation of constants, and say why the first term  $f(\rho)$  can be omitted.

7a. Relate shortly the essential points of the method by which the orbit of a comet is determined from three observations. (No formulae).

7b. Derive from first principles the perturbation of the components of the velocity and derive the rate at which the parameter of the osculating ellipse changes. Merely say how the perturbations of the parameter are found.

## FOURTH PAPER—ONE HOUR.

[The lecture notes must be used in connection with these questions. Answer in a sentence and do not copy formulae unless they are especially asked for.]

1. Physical libration of the moon. There are two observational facts bearing on the rotation of the moon: if the one be accepted the other follows from the equation of rotation. Give these facts and the equation.

2. Motion round two fixed masses. Choose Orbit No. 25.

(a) Show in a diagram the values of the roots  $M(x)=0$ ,  $L(x)=0$  relatively to  $x=\pm c$ .

(b) Derive the ranges of  $q_1$  and  $q_2$  saying whether there is libration or limitation.

(c) Explain why the orbit lies within an ellipse and is a spiral which constantly approaches the line between the two masses without reaching it in finite time.

3. Let two points be at mutual distance  $2c$ . Let  $q_1$  and  $q_2$  be the elliptic coordinates of a point with reference to them. Show a point  $q_1=4c$ ,  $q_2=-c$ .

4. Perturbations. Delaunay's theory of the moon.

(a) By what kind of coordinates is the largest part of the perturbations by the moon of the coordinates of the earth taken into account in the perturbative function due to the sun's attraction on the moon.

(b) In what way does this perturbative function, when developed according to power of  $r/r'$ , differ from the perturbative function which contains the coordinates of the sun referred to the earth.

5. Write out the term of the perturbative function which explains the retrograde motion of the node.

6. How is the perturbation due to the spheroidal figure of a planet taken into account?

7. Variation of constants.

What is  $\frac{R(t\alpha\beta)}{\alpha_1}$  equal to (1) on the assumption that  $\alpha_1\dots\beta_3$  are elliptic elements and  $\alpha_1=e$  (eccentricity)? (2) on the assumption that  $\alpha_1\dots\beta_3$  are the canonic constants of the intermediate orbit?

8. Let  $q_k$  and  $p_k$  be canonic coordinates. (a) Define canonic coordinates. (b) What conditions must be satisfied by the partial differential quotients of  $x_k$  and  $y_k$  by  $q_k$  and  $p_k$  of which they are functions, so that  $x_k$  and  $y_k$  are again canonic coordinates?

## CHEMISTRY.

## FIRST PAPER—THREE HOURS.

(Answer SIX questions.)

1. The heat of neutralisation of dilute solutions of the gramme-equivalent of strong acids, such as hydrochloric and nitric acids, by

dilute solutions of strong bases such as caustic soda has in all cases nearly the same value, whilst the value in the case of a weak base or acid is often considerably greater or less. How are these observations explained, and what other evidence can you give in support of the explanation?

2. Discuss the conditions which influence the rate at which a chemical change progresses. Explain the term "velocity constant," and give examples illustrating the method of determining its value.

3. Describe one method of determining the vapour density of a substance. Discuss and explain the values obtained for (a) Ammonium chloride in presence and in absence of moisture and (b) phosphorus pentachloride. Under what conditions is the value corresponding to  $\text{PCl}_5$  obtained in the case of the latter substance?

4. How would you determine the solubility of a solid and of a gas in water at say  $20^\circ \text{C}$ .? A current of a gaseous mixture is passed through water. State the law which governs the amount of each of the constituents which is dissolved.

5. How is an explosion propagated through a gaseous mixture? State how the velocity of propagation has been measured and the conditions which affect it.

6. How is potassium persulphate prepared? Give an account of the properties of the persulphates.

7. How does the addition of carbon to iron affect its properties? Show by means of a diagram the changes which take place when samples of iron containing various quantities of carbon are cooled from  $1800^\circ \text{C}$ . to ordinary temperatures. Discuss the possible constituents in specimens of iron containing (a) 0.5, (b) 1.2, (c) 3 per cent. of carbon.

## SECOND PAPER—THREE HOURS.

(Answer SIX questions.)

1. Describe shortly the process of Bessemerising copper matte. Discuss the influence of impurities in copper on its suitability for electrical purposes, referring to the cases of underpoled and overpoled copper.

2. Describe in detail the method of preparing acetyl chloride, and state its action on (a) alcohols, (b) acids, (c) amines, and (d) zinc alkyl.

3. Give the possible structural formulae of a substance having the composition  $\text{C}_5\text{H}_{12}\text{O}$ , and the reactions by means of which you would identify it.

4. Give a detailed description of the method of preparing ethyl aceto-acetate, and illustrate its application as a synthetical agent by as many examples as possible.

5. Starting from benzene how would you prepare toluene, phenol, triphenylmethane, and pararosaniline?

6. How would you prepare benzaldehyde, and what is its action on caustic potash and on potassium cyanide? Under what conditions

does it condense with acetic acid and with acetone and what products result?

7. State the methods by means of which pyridin and quinolin or their homologues have been prepared synthetically and describe in detail the method of preparing one of these substances.

## PHYSIOLOGY—THREE HOURS.

### ALONG WITH M.B. PAPER—Two Hours.

1. Answer the questions in the paper for M.B. and two of the following:
2. Discuss the evidence as regards the mechanism or mechanisms which control the secretion of pancreatic juice.
3. Discuss the evidence as to the form in which the products of the digestion of proteids are absorbed from the alimentary canal.
4. Discuss the evidence we possess as regards the sources of the fats of the body.

## GEOLOGY—PART I.

### FIRST PAPER—THREE HOURS.

(For candidates in B.Sc. Pt. I. ; M.A. ; B.Sc. in Agriculture ; B.Sc. in Engineering ; and B.Sc. in Mining Engineering.)

1. Describe the principal deposits now being laid down on the sea bottom.
2. How are escarpments formed? Distinguish between dip (consequent), strike (subsequent), and escarpment (obsequent) streams.
3. Describe the destructive and constructive actions of the wind, giving examples.
4. Describe any igneous rock much used in Glasgow for road metal and another used for building stone, and show how their durability is related to their structure.
5. Draw a geological section across the Glasgow Basin from the Carron valley through Kilsyth to the south of Croy.
6. Contrast the characters of a limestone and of a clay district, especially in regard to their scenery, water supply and soils.

### SECOND PAPER—Two Hours.

(For candidates in B.Sc. Pt. I. ; M.A. ; and B.Sc. in Mining Engineering. Candidates for B.Sc. Pt. I. and M.A. take Nos. 1, 2, 3, 4, 5, and 7. Candidates for B.Sc. in Mining Engineering take Nos. 1, 2, 3, 6, 7, and 8.)

1. Describe the following minerals, giving their chemical composition, crystallographic system, characteristic forms, optical characters,

and such other facts as you know concerning them : Ilmenite, apatite, spinel, augite, and biotite.

2. Compare the different members of the amphibole group, giving those characters which are common to the whole group and those which are special to its individual members.

3. Make a drawing of a mineral of the orthorhombic system, showing macropinakoid, prism, and macrodome ; give the symbols of the faces. Name four minerals that crystallise in that system, giving their chemical composition. Make also a drawing of a deltoidal triakisoctahedron (icositetrahedron), and name a mineral that crystallises in that form.

4. Describe briefly the Triassic rocks of Great Britain.

5. Describe the chief classes of fossils belonging to the Protozoa.

6. Describe the structure of a typical goldmine ; explain how its ores have probably been formed.

7. Describe the Lanarkshire Coalfield.

8. Explain the following terms : Lode ; shoot of ore ; placer ; hade ; metasomatic ; hanging wall.

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## GEOLOGY—PART II.

### FIRST PAPER—THREE HOURS.

1. Describe Becke's method of determining minerals by the use of their refractive index ; and explain its special value in petrology.

2. What is isomorphism ? Explain your answer by reference to the group of the carbonates.

3. How can you identify the species of the triclinic feldspars in thin rock slices and in cleavage fragments ?

4. Describe the shells of the chief classes of the Mollusca.

5. Describe the Old Red Sandstone of Scotland, and discuss its probable origin.

6. Draw a geological section across the Glasgow Basin from the Carron valley through Kilsyth to the south of Croy.

### SECOND PAPER—TWO HOURS.

1. Describe the structure of the South of Scotland between the Great Glen and the Midland valley.

2. Explain Metasomatism. Describe the structure of a mining field in which the ores are metasomatic in origin.

3. Describe the distribution and origin of the chief British iron ores.

4. Write an account of the Rand Goldfield, and explain the theories as to the origin of its gold.

## ZOOLOGY.

## FIRST PAPER—THREE HOURS.

(Not more than SIX questions to be attempted. The answers to be illustrated by sketches wherever possible.)

1. Explain the principal features of the heart and arterial arches in reptiles, birds and mammals.
2. Give an account of the mode of suspension of the jaws in fishes.
3. Explain what is meant by the terms: Physoclistic, heterocercal, sacral, ctenoid, glomerulus, corpus luteum, diphydont.
4. Describe the respiratory apparatus of *Chiton*, and compare it with that of *Patella*.
5. Refer to their systematic position, and mention any features of especial interest in the following: *Solenomya*, *Anomia*, *Cuspidaria*, *Notarchus*, *Gastropteron*, *Cyclostoma*, *Testacella*, *Opisthoteuthis*.
6. Mention the evidence that might be used in an argument in favour of the descent of existing Mollusca from the metamerically segmented forms.
7. Give a general account of the Echinodermata. Enumerate the principal divisions, and state their chief characters.
8. Explain what is meant by Protective Mimicry. How does it come about? What is Müllerian Mimicry?
9. Discuss shortly the present standpoint regarding the reduction of the number of the chromosomes during the maturation of the gametes.

## SECOND PAPER—THREE HOURS.

(Not more than SIX questions to be attempted. The answers to be illustrated by sketches wherever possible.)

1. Discuss the evolutionary history of the series of pocket valves found at the origin of the ventral aorta in Vertebrates.
2. Give an account of the Dipnoan Fishes. Mention the principal genera, and state where they occur. Give an account of the habits and life history of these fishes.
3. Discuss the systematic position of the *Tuatera* (*Sphenodon*), or of the *Chimaera*.
4. Give a moderately detailed account of the structure of either *Actaeon* or *Doris*. If you choose the former, indicate what are the most important morphological features of the animal, and explain why they are of interest. If you choose the latter, discuss the question whether the bilateral symmetry of the animal is primary or secondary.
5. Explain, with examples, the meaning of the following terms: *Hectocotylus*, *Aptychus*, *Dialyneury*, *Zygoneury*, *Triaulic*, *Byssus*, *Nacre*.

6. Describe any modifications of the foot in the Mollusca associated with a swimming mode of life.

7. Describe and compare the central nervous system of *Balanoglossus*, *Amphioxus*, and a Vertebrate embryo.

8. Describe the structure of the Actinotrocha larva. What remarkable change occurs during the metamorphosis?

9. Give an account of the life-history (the complete life-cycle) of a typical Hydroid polyp.

## B.—IN ENGINEERING.

### FIRST EXAMINATION.

### MATHEMATICS.

#### FIRST PAPER—THREE HOURS.

(NOTE.—*Candidates may obtain full marks by doing correctly about TWO-THIRDS of this paper.*)

1. A quadrilateral  $ABCD$  can be inscribed in a circle. Prove that the area of the quadrilateral is given by the expression  $\sqrt{(s-a)(s-b)(s-c)(s-d)}$ , where  $a, b, c, d$  denote the measures of  $AB, BC, CD, DA$ .

If  $a=15, b=11, c=9, d=17$ , calculate the area.

2. State and prove De Moivre's Theorem.

Resolve  $x^8 - 2x^4 \cos 4\theta + 1$  into real quadratic factors.

3. Prove that the equation

$$ax + by + c + t(Ax + By + C) = 0$$

represents a variable straight line through the point of intersection of the lines  $ax + by + c = 0$ ,  $Ax + By + C = 0$ ,  $t$  being a variable independent of  $x$  and  $y$ .

Prove that the intersections of the locus given by

$$(x - y - 1)(x - y - 2) = 0$$

and the locus given by

$$(x + y - 3)(x + y - 4) = 0$$

lie on the circle  $x^2 + y^2 - 5x - 2y + 7 = 0$ . Make in one diagram a drawing of the graphs of these equations.

4. Find the locus of the middle points of chords of the parabola  $y^2 = 4ax$ , parallel to the line  $y = mx$ .

A variable circle is described to pass through the fixed point  $(a, 0)$  and to touch the fixed line  $y = x$ . Find the equation to the locus of the centre of the circle. Roughly sketch the locus.

5. Find the equations to the tangent and normal to the ellipse  $x^2/a^2 + y^2/b^2 = 1$ , at the point  $(a \cos \theta, b \sin \theta)$ .

$P$  is a point common to the curves

$$x^2/a^2 + y^2/b^2 = 1, \\ \text{and } x^2/(a^2 - c^2) + y^2/(b^2 - c^2) = 1;$$

prove that the curves cut at right angles at  $P$ .

6. Find, from first principles, the differential coefficients of  $\sin x$  and  $\tan x$ .

Find the first derivatives of  $\sqrt{\frac{1-x}{1+x}}$ ,  $e^x(\sin x - \cos x)$ ,  $\log \frac{x^2+x+1}{x^2-x+1}$ , and the second derivative of  $\tan^{-1}x$ .

7. If  $f(x)$ ,  $f'(x)$ ,  $f''(x)$  are continuous, state what properties of the graph of  $f(x)$  can be deduced from examination of the zero-values of  $f'(x)$  and  $f''(x)$ , giving reasons.

Shew that the function  $x^3 - 3x^2 + 5x + 1$  has no maximum or minimum value. Trace the graph of the function.

8. If  $f(x)$  and  $f'(x)$  are continuous from  $x=a$  to  $x=b$ , shew from geometrical considerations, or otherwise, that

$$f(b) = f(a) + (b-a)f'(t),$$

where  $t$  lies between  $a$  and  $b$ .

Assuming Maclaurin's Theorem, expand  $\tan x$  in powers of  $x$  as far as  $x^5$ .

9. Find an expression for the radius of curvature of a curve which is defined by the equation  $y=f(x)$ .

Find the radius of curvature at the origin of the conic

$$2x^2 + 3y^2 - 3x - 4y = 0.$$

10. Integrate the following functions of  $x$ :

$$(1) \frac{x^2 - x + 1}{x + 1}, \quad (2) \frac{1 + x}{\sqrt{2 + 2x - x^2}};$$

and find the values of the definite integrals:

$$(3) \int_0^\infty e^{-x} \cos x \, dx, \quad (4) \int_0^{\frac{\pi}{2}} \cos^3 x \, dx.$$

11. Establish as a definite integral the formula for the area between a curve, the  $x$ -axis and two fixed ordinates.

Trace the curve  $y^2 = x^2(a^2 - x^2)$ , and find the area of a loop.

12. Establish the formulae for the surface and volume of the solid generated by revolving a portion of the curve  $y=f(x)$  through four right angles round the  $x$ -axis.

Find the surface and volume of the spheroid generated by the complete revolution of the ellipse  $x^2/a^2 + y^2/b^2 = 1$  about its major axis.

SECOND PAPER—See p. 575.

NATURAL PHILOSOPHY.—FIRST PAPER—See pp. 576-578.

” ” SECOND PAPER—See pp. 578-580.

CHEMISTRY—See p. 582.



## FINAL EXAMINATION.

## NATURAL PHILOSOPHY.

## SPECIAL HIGHER PAPER—THREE HOURS.

NOTE.—Students who have not passed in Ordinary Natural Philosophy must attend and take the second Ordinary Paper—See pp. 578–580.

Do not attempt more than EIGHT of the following questions.

1. Show that the period of oscillation of a compound pendulum is  $2\pi\sqrt{\frac{h^2+k^2}{hg}}$ , where  $h$  is the distance of the centroid from the axis, and  $k$  is the radius of gyration about a parallel axis through the centroid.

A uniform circular disc of mass  $m$  and radius  $a$  oscillates through an angle  $\alpha$  from the vertical, about a horizontal axis which forms a tangent to the disc. Show that when the disc reaches the vertical position the pull on the axis is  $\frac{1}{5}(13-8\cos\alpha)mg$ .

2. Define the hodograph of a moving particle, and show that the velocity in the hodograph is identical with the acceleration in the path.

A particle describes the equiangular spiral  $r=ae^{k\theta}$  with constant angular velocity  $\dot{\theta}$ . Show that the hodograph is another equiangular spiral.

3. A horizontal rod  $AB$  of weight  $W$  is suspended by two parallel threads of equal length  $l$ , at distance  $2d$  apart, the centroid of the rod being midway between them. A couple applied to  $AB$  in a horizontal plane keeps the suspension twisted so that  $AB$  makes an angle  $\theta$  with its initial position of rest. Show that the moment of the couple is

$$\frac{Wd^2 \sin \theta}{\sqrt{l^2 - 4d^2 \sin^2(\theta/2)}}.$$

If the bar is turned round till  $\theta=90^\circ$ , and is then let go, show when it reaches the position of equilibrium, its angular velocity  $\omega$  is given by  $k^2\omega^2=2g(l-\sqrt{l^2-2d^2})$ ,

where  $k$  is the radius of gyration about the vertical axis through the centroid.

4. Prove that the intrinsic equation of a heavy chain hanging under its own weight from two points  $P$  and  $Q$  in the same horizontal line is  $s=\frac{X}{mg}\tan\phi$ , where  $X$  is the stretching force at the lowest point of the chain, and  $m$  is the mass of unit length.

If  $X$  is very great, and  $E$  is the intersection of the normals to it at  $P$  and  $Q$ , show that  $EP$  is approximately equal to  $\frac{X}{mg}$ .

5. State d'Alembert's Principle, and explain its importance in questions affecting the motion of extended bodies; or, alternatively, indicate how the equations of motion of such bodies may be established.

Show that the moment of momentum of a body rotating on a fixed axis remains constant if no external forces act on the body.

A turn-table of mass  $M$  rotates smoothly on an axis at its centre, and a man of mass  $m$  walks on it at a uniform rate  $u$  along a radius from the centre. Show that if  $\omega_0$  is the initial angular velocity of the turn-table, and  $k$  is its radius of gyration, the angular displacement in a time  $t$  is  $\omega_0 p \tan^{-1} \frac{t}{p}$ , where  $p^2 = Mk^2/mu^2$ .

6. Write down the equations of motion of a rigid body in two dimensions, and examine briefly the cases when their first integrals can be written down.

A sphere of radius  $a$  rolls on two parallel rails, at a distance  $2c$  apart, inclined at an angle  $\alpha$  to the horizon, show that the acceleration of the centre of the sphere is

$$\frac{5g(a^2 - c^2)}{7a^2 - 5c^2} \sin \alpha.$$

7. Show that inside a uniform sphere the force of gravitation is proportional to the distance from the centre; and that treating the earth as such a sphere, and neglecting effects due to its rotation, the time of descent of a body along a tube from the surface to the centre would be  $\frac{\pi}{2} \sqrt{\frac{a}{g}}$ , where  $a$  is the radius, and  $g$  the acceleration at the surface.

If a straight tunnel 20 miles long connects two points on the earth's surface, calculate the time which a train, moving from rest under its own weight only, and acted on by no resistance, would take to pass through the tunnel

$$[a = 4000 \text{ miles}; g = 32 \text{ ft./sec}^2.]$$

8. Show that angular velocities about intersecting axes can be compounded by the parallelogram law.

If the driving wheel of an engine 7 ft. in diameter is travelling at a speed of 30 miles an hour round a curve of  $\frac{1}{4}$  mile radius, find the magnitude of the resultant angular velocity, and the direction of the instantaneous axis of rotation.

9. State Kepler's Laws of Planetary Motion, and employ the law of gravitation to establish the Third Law for satellites which describe circular orbits round a primary body.

Obtain the differential equation of a planetary orbit

$$u + \frac{d^2u}{d\theta^2} = \frac{\mu}{h^2},$$

and interpret the constants  $\mu$  and  $h$ .

10. Define the centre of buoyancy and the metacentre of a floating body.

Investigate the condition that the equilibrium of a floating solid of

revolution may be stable for small angular displacements about a horizontal axis.

Apply your result to a thin hollow cone of mass  $m$ , height  $h$ , vertical semi-angle  $\alpha$ , floating in water.

11. Show that if  $p$  is the pressure and  $q$  the velocity at any point of a liquid of density  $\rho$  in steady stream-line motion under forces which have a potential  $V$ ,

$$\frac{p}{\rho} + \frac{1}{2}q^2 - V = C.$$

How does the fact of irrotationality of the motion or the reverse affect the constant  $C$ ?

Hence obtain Torricelli's theorem concerning the discharge of liquid from a narrow orifice. Can the rate of flow of liquid be calculated from the dimensions of the orifice, and the velocity at emergence?

12. Define a reversible engine and show that all engines reversible in the sense defined are equally efficient.

Describe the operations on the working substance which constitute a Carnot cycle. By means of such a cycle define absolute thermodynamic temperature.

13. Prove by means of an indicator diagram, or otherwise, the relation

$$\frac{\partial p}{\partial v_\phi} = \frac{C}{c} \frac{\partial p}{\partial v_\theta},$$

where  $C$ ,  $c$  are the specific heats of the substance under the conditions, pressure constant, volume constant, respectively.

14. Show how by means of thermodynamic reasoning from experimental data, the density of saturated steam at different temperatures can be determined. Explain generally how these data have been found.

## ENGINEERING.

### FIRST PAPER—TWO HOURS.

(Not more than six questions are to be attempted.)

1. Give a brief account of the processes used in the production of pig iron from Clay Ironstone. Describe the chief appliances used, and deal specially with the chemical and physical changes in the gases concerned in the smelting processes and the utilisation of the gases leaving the furnace.

2. Give a brief account of the process of manufacture of Basic Bessemer Steel. Why was a process of this kind sought for, and what were the difficulties to be overcome?

3. Describe and account for the differences in physical constitution and properties of wrought iron and mild steel. Discuss the advantages and disadvantages of mild steel as compared with wrought iron for engine crank shafts.

4. Give an account of the chief properties of the series of copper tin and copper zinc alloys, and state some of the chief uses of such alloys.

5. Find an expression for the stress in the rim of a revolving pulley due to centrifugal action.

The stress in a rim of a cast iron pulley, 2 feet diameter, due to centrifugal action is not to exceed 8000 lbs./inch<sup>2</sup>. Find the maximum speed at which this pulley may run.

6. A beam 60 feet long rests on supports at 10 feet and 45 feet respectively from one end and carries a uniformly distributed load of 1000 lbs. per foot run. Sketch carefully the Bending Moment and Shearing Force diagrams for the beam. Give the Scales to which these diagrams are plotted. What are the Bending Moment and Shearing Force midway between the supports?

7. Describe with sketch the crank and slotted lever quick return mechanism as applied to shaping machines. Show how to find graphically the velocity of the tool at any point in its stroke when the speed of the driving plate and the dimensions of the mechanism are given. Prove your method.

8. Describe with sketches the Stephenson link motion gear as applied to steam engines. What is meant by the term "notching up," and for what purpose besides the reversing of the engine is the gear useful? Sketch indicator diagrams showing the general effect of "notching up" upon the steam distribution.

9. The indicator diagrams and other necessary data for a double acting steam engine are given. Show how to find the Moment of Inertia of a flywheel which would keep the fluctuation of angular velocity of the engine shaft, during a revolution, within assigned limits, the load on the engine being constant. Take into account the effect of inertia of the moving parts and show how to fix and use the scales of any diagrams you employ.

## SECOND PAPER—Two Hours.

*(SEVEN questions only are to be attempted.)*

1. Describe briefly the operations in making a chain survey, say of a small estate; dealing specially with

- (a) the appliances used,
- (b) the determination of horizontal distances on sloping ground,
- (c) the arrangement of the chain lines,
- (d) the booking of the measurements,
- (e) the probable accuracy of the work.

2. Distinguish between the Y and the transit theodolite. Explain the relative advantages and disadvantages of each type as affecting the provisions for adjustment, and the convenience in use.

3. Describe the apparatus you would use and the manner in which you would proceed to measure the base lines in triangulation surveys, when the degrees of accuracy required are 1 in 5,000, 1 in 50,000, and 1 in 500,000 respectively.

4. Describe, with the aid of sketches, the construction of a Gravatt's or Dumpy Level. State the conditions to be satisfied for its complete adjustment, and show how the adjustments are made.

5. The accompanying diagram illustrates a set of levelling observations. Enter them in a field book, cast up, and ascertain if the work checks. Under what circumstances would you make allowances for the curvature of the earth in taking a levelling observation? Give a simple rule for calculating the amount of the correction.

6. Two straight reaches  $AB$ ,  $DC$  of a railway would, if produced, meet in an inaccessible point. The length of the transversal  $BC$  is 67.40 chains, the angle  $ABC$  is  $160^{\circ} 30'$ , and the angle  $BCD$  is  $154^{\circ} 20'$ . Determine the points at which a circular curve of 50 chains radius would meet the straight tangents, and explain how you would proceed to set out the curve on the ground, making all calculations necessary for the purpose.

7. Describe the Amsler Planimeter. Prove the principle of its action, and explain how it can be used to measure comparatively large areas.

8. A tank is constructed of circular form in plan, and of the section shown on the accompanying sheet. Find the volume of water it contains when filled to the level indicated, and justify the mode of calculation you adopt. Sketch a curve showing the volumes for all depths of water.

9. State some of the chief purposes for which bore holes and trial shafts are made in civil engineering work. Sketch and describe a diamond boring tool, and explain how it is used.

### THIRD PAPER—Two Hours.

(Not more than six questions are to be attempted.)

1. Describe in detail what happens when 1 lb. of water substance is heated from below freezing point to a temperature of say  $300^{\circ}$  F. under atmospheric pressure. Name, and give approximate values of, the quantities of heat involved in these changes.

Find the "external work" and the "internal energy" of 1 lb. of steam at 145 lbs. per sq. inch absolute pressure, the temperature being  $356^{\circ}$  F., and the volume 3.1 cubic feet.

2. Describe the "Carnot" cycle, and explain what is meant in calling it a "reversible" cycle. Wherein does the Rankine-Clausius cycle differ from the Carnot? Deduce expressions for the efficiencies of heat engines working on these cycles between given temperature limits.

3. Discuss the advantages and disadvantages of clearance in steam engine cylinders, stating the types of engine to which your remarks apply.

4. What is meant by the term "missing quantity" of steam in a steam engine cylinder? Discuss the various causes to which it may be due.

5. In a two-cylinder compound steam engine, the steam is admitted to the H.P. cylinder at a pressure of 150 lbs. per sq. inch absolute, and

cut off at half stroke. The volume of the L.P. cylinder is three times that of the H.P. cylinder, the clearance at each end of each cylinder is 9 per cent. of the cylinder volume, and the condenser pressure is 3 lbs. per sq. inch. Assuming the expansion in both cylinders hyperbolic and the receiver volume large, draw the indicator diagram referred to the L.P. piston and show how to obtain the work done per lb. of steam; the diagram factor being 0.8.

6. Define entropy, and explain the construction and some of the uses of the entropy temperature diagram for water and steam. Show how to draw "constant volume" lines on the diagram.

7. Describe a brake suitable for testing an ordinary steam engine of about 20 H.P. State how you would carry out an accurate test with this brake. Discuss the means used to prevent oscillations of brakes.

8. Explain the Otto cycle of operations as used in gas engines, and sketch the probable form, roughly to scale, of the indicator diagram.

State, roughly, what proportion of the energy of the gas used is carried away (a) by the cooling water; (b) by the exhaust gases.

Explain the advantages and disadvantages of the Otto cycle as compared with other cycles that have been proposed.

#### FOURTH PAPER—THREE HOURS.

*(Not more than EIGHT questions are to be attempted.)*

1. Describe the successive effects of an increasing pull stress applied to a specimen of mild steel, and illustrate your answer by a stress strain diagram sketched to scale for a case that you specify. Discuss and illustrate the influence upon the ultimate strength and percentage elongation of varying the proportions of length to diameter in specimens of a ductile material.

2. With respect to the strength and stiffness of beams, prove the formulas:

$$\frac{M}{I} = \frac{f}{y} = \frac{E}{R}$$

stating the assumptions on which they are based, and explaining the meanings of the symbols used.

A rolled steel joist, supported at the ends, has a clear span of 12 feet, a depth of 10 inches, flanges 3.5 in. in width, and an equivalent uniform thickness of 0.5 inch.

Determine the uniformly distributed load, in lbs. per foot run, for which the maximum stress in the beam will be 6 tons per sq. inch; also determine the corresponding radius of curvature at the centre of the beam, assuming  $E = 13500$  tons per sq. inch.

3. A beam of uniform section is held directionally and in position at one end, simply supported at the centre, and free at the other end. Assuming the beam to be straight and level when unloaded, investigate a formula for the maximum deflection produced by a uniformly distributed load, assuming any formulae relating to cantilevers.

4. Explain and justify a method for determining the push and pull stresses in all the members, and bending action in the bar  $AB$  of the loaded frame shown on the accompanying sheet, assuming that the bar  $AB$  is continuous throughout its length, and that all the joints between members are flexible. Determine the maximum bending moment in the bar  $AB$  from the data given.

5. A helical spring, having a mean diameter of 5" consists of 12 turns of steel wire, 0.25" in diameter.

If a load of 2 lbs. causes an extension of 0.5", find the modulus of rigidity for the material and also the maximum stress in the wire, proving the formulae you use and stating the assumptions on which they are based.

6. State the general principles upon which similar structures can be compared,

- (a) as regards strength to resist distributed forces,
- (b) stability to resist overturning by wind pressure,
- (c) suitability to bear their own weights.

Give illustrations of the application of each case.

7. State and explain Thomson's theorem of similar flows, and apply it to obtain expressions for the flow over rectangular and  $V$  notches.

8. A turbine is to be erected to give 50 brake horse-power with water taken from a lake in which the free level is 120 feet above the tail race. Assuming the pipe to be 1500 feet long, find the diameter required in order that the loss of power through pipe friction will not exceed 2 per cent. of the power of the flow. Assume a probable efficiency for the turbine.

9. In respect to revolving masses of water, investigate the surface form,

(a) when the angular velocity of rotation is constant throughout the mass,

(b) when the sum of the potential and kinetic energies is constant throughout.

Illustrate the bearing of these cases upon the action of centrifugal pumps.

10. Give an account of Reynolds' experiments on the flow of water through pipes, and state the chief results arrived at. Compare and contrast the formulae Reynolds deduced with those previously in use.

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## ENGINEERING DRAWING AND DESIGN.

### FIRST PAPER—THREE HOURS.

1. In the mechanism shown on the accompanying sheet, the four equal links  $AB$ ,  $BC$ ,  $CD$  and  $DA$  are jointed at  $A$ ,  $B$ ,  $C$  and  $D$ .  $C$  is pivoted to a board and point  $A$  is controlled by a radius rod pivoted to the board at  $O$ . Trace the complete locus on the board of the point of intersection  $P$ , of  $OA$  and  $BD$ .

2. A 7" pinion, having 11 teeth with radial flanks, is to gear with a rack having teeth with parallel flanks. Draw the complete profiles of a pair of engaging teeth.

3. Determine :

(a) The projections of a line  $AB$ , 3" in length between its traces, inclined to the H.P. at  $45^\circ$  and to the V.P. at  $30^\circ$ . How many different solutions are there of this problem?

(b) The plan and elevation of an equilateral triangle of 2" side when the angular points are  $1''$ ,  $1\frac{1}{2}''$  and  $1\frac{3}{4}''$  respectively above the H.P., and the plan of one side makes an angle of  $30^\circ$  with the ground line.

(c) The projections of the line of intersection of two oblique planes the traces of which all intersect in a point on the ground line, and determine the angle between the planes.

4. Draw the traces of the two planes containing the line  $AB$  and touching the sphere shown on the accompanying sheet, also the projections of the points of contact of the planes with the sphere.

5. Draw the projections of the curves of intersection of the cylinder and anchor ring partly shown on the accompanying sheet.

6. Draw the projections of a regular tetrahedron of  $1\frac{1}{2}''$  edge with one face inclined at  $30^\circ$ , and another at  $45^\circ$  to the H.P.

7. Make an isometric projection of the crank shown on the accompanying sheet to a scale of  $1\frac{1}{2}''=1$  foot.

## SECOND PAPER—THREE HOURS.

### PART I.

1. (a) Make a sketch, in section, of a Meyer valve gear; showing the cylinder ports, and the valves in their mid positions. Having given the angles of advance and "throws" of the eccentrics, the points of cut-off and release, and the lead of the main valve, explain, by the aid of sketches, how you would proceed to determine by the Harmonic-diagram method, the laps of the valves and the points of admission and compression.

Or,

(b) With respect to moving loads on railway under-bridges, describe, with the aid of sketches, how you would proceed to determine, graphically, for a given train-load and span :

(1) The maximum bending moment, and the point along the span at which it occurs.

(2) The maximum shear.

2. A plate web girder having a clear span of 50 feet is subject to a dead load of 1 ton per foot run and an equivalent uniform live load of 3 tons per foot run.

Design and make a dimensioned sketch of a suitable central transverse section for the girder, explaining the assumptions made in determining the working stresses you use.



## PART II.

Design and make detailed drawings of one of the following :

(a) The shell of a marine boiler of the Scotch type having a diameter of 14 ft. 6 in., a length of 11 ft. and suitable for a working (gauge) pressure of 165 lbs. per sq. inch.

(b) A steel roof truss, suitable for a roof having a span of 64 ft. and a rise of 12 ft., the trusses being spaced 12 ft. apart, and the roof subject to a dead load of 20 lbs. per sq. foot of covered area and a normal wind pressure of 30 lbs. per square foot acting on one side of the roof surface.

(c) A cast-iron spur wheel having a diameter of 5 ft. 6 in. and suitable for transmitting 400 horse power at a speed of 100 revs. per min.; assuming the teeth subjected to moderate shock, and a diameter of eye of nave of 8".

## GENERAL LABORATORY EXAMINATION.

## THREE HOURS.

*Three questions are to be attempted, of which ONE and ONE ONLY must be from Group A.*

*In answering each question you are to deal with (a) the apparatus and instruments employed, (b) the setting-up and adjusting of apparatus, (c) the booking of observations, (d) the calculation and probable accuracy of your results.*

## A.

1. Describe with sketches how you would carry out a complete test on a single cylinder internal combustion engine of approximately 10 B.H.P.

2. Describe with sketches a Pelton Wheel or a Thomson Turbine. How would you carry out a complete test of one of the above turbines, paying particular attention to the most economical speed for running under given conditions of head of water, etc. ?

Deduce from the above tests the efficiency and output characteristics when running at constant speed with variable load.

3. Two similar continuous current, series motors are geared to the same countershaft by similar spur gears. What arrangements would you make to determine :

(a) The magnetic characteristic of one of these motors ?

(b) The useful torque, speed and efficiency characteristics of one of the machines running as a motor at constant applied voltage ?

4. Discuss the direct and the indirect methods of obtaining the efficiency of electrical machines.

How would you apply the indirect method to the testing of a 5 K.W., low tension, single phase A.C. transformer ?

## B.

5. How would you carry out complete tests in tension and compression of a specimen of mild steel on the 10 ton or 100 ton testing machine? Describe fully the autographic stress-strain recorder employed in this experiment.

6. How would you determine, accurately, the calorific value of a sample of (a) coal or (b) of coal gas?

7. How would you determine experimentally the law of the flow of water over a rectangular notch? Discuss the probable accuracy of the formula adopted in the cases of flows at relatively low and high heads respectively.

8. How would you determine the efficiency and velocity ratio of the hoisting gear of a two ton travelling crane?

Sketch a usual form of crane mechanism.

9. Describe some form of potentiometer. How would you calibrate a continuous current voltmeter from a constant voltage supply, and a continuous current ammeter by means of this potentiometer?

10. How would you determine accurately the magnetic characteristic of a sample of mild steel?

11. Describe in detail the methods you consider most suitable for the determination of the efficiency of a shunt wound, continuous current generator:

(a) at full load.

(b) at  $\frac{1}{2}$  load.

12. How would you carry out a complete test on a 10 k.w., 3 phase, asynchronous motor? Compare the direct with the indirect method of obtaining the efficiency of such a motor. Why are the indirect methods often preferred?

## ELECTRICAL ENGINEERING.

## FIRST PAPER—Two Hours and a Half.

(Only SEVEN questions may be attempted and question FIVE MUST BE one of these.)

1. Define the electromagnetic units of current, electromotive force, resistance and capacity (a) in the c.g.s. system, (b) in the practical system.

What are the practical electrical units of power and energy, and how are they related to the practical mechanical units of power and energy respectively?

2. In a continuous current distribution system, the E.M.F. at the receiving station is 500 volts and the power received is 100 k.w. The receiving station is distant 1 kilometre from the generating station. If the maximum allowable current density in the copper mains is 1000 amps./inch.<sup>2</sup> (155 amps./cms<sup>2</sup>), determine the cross section and

resistance of the mains, the loss of energy and drop of potential, the weight and cost of the copper in the mains. The price of copper is £100 per ton; density of copper 8.9, and specific resistance of copper  $1.7 \times 10^{-6}$  ohms per cm.<sup>3</sup>.

3. You are given a compound wound, 6 pole, D.C. generator. The armature is parallel wound. How would you determine experimentally (a) the effective resistance of the armature winding, (b) the brush contact resistance, (c) the resistance of the field magnet coils?

In the above armature there are 232 conductors, each of cross section 0.56 cms.<sup>2</sup> and of length 82 cms.; the armature current is 1180 amperes. What is the armature resistance and the fall of potential in the armature?

4. Explain shortly what is meant by the magnetic field or circuit, magnetic lines of force and magnetic tubes of force. Define magneto-motive force and reluctance of a magnetic circuit and assuming that the M.M.F. in a magnetic circuit is  $0.4\pi \times$  exciting ampere turns in the interlinked electric circuit, find and prove an expression for the total flux in a magnetic circuit in terms of the exciting ampere turns and of the reluctance of the magnetic circuit.

5. The accompanying sketch gives the magnetic circuit of a 6 pole shunt wound dynamo. Determine the field magnet turns per spool when the useful flux per pole entering the armature is  $5.9 \times 10^6$ . Leakage factor is 1.2 and shunt current 13.5 amperes.

6. Describe clearly with the aid of sketches the main differences between series, shunt and compound wound, continuous current generators. Why are the field magnet coils of D.C. generators generally shunt or compound and rarely series wound? How would you determine, experimentally, the magnetic or "no load" characteristic of a shunt wound generator?

7. Deduce an expression for the torque of a continuous current motor in terms of the current per armature conductor, the number of armature conductors and the useful flux per pole entering the armature.

A 4 pole motor takes 20 amperes at full load; the armature is series wound and has 984 conductors. The active flux per pole, when the armature current is 20 amperes, is  $2.5 \times 10^6$ , what is the torque of the motor?

How may the speed, torque, output and efficiency characteristics of a series motor be approximately deduced from fundamental principles?

8. Describe carefully and briefly by the aid of diagrams the action of the armature current carrying conductors on the main flux of a continuous current generator. Show how the commutation and the running of the generator under fluctuating loads is thereby affected.

Describe two of the usual methods adopted in practice to counteract this reaction of the armature on the main field flux.

9. Make neat diagrammatic sketches of the electrical connections in the following cases (a) the field magnet coils of a generator separately excited through a variable resistance and short-circuiting switch, (b) a starter with no volt release and overload release for a small D.C. shunt motor, (c) arrangements for paralleling two compound wound D.C. generators. Give reasons for the connections adopted in each case.

## SECOND PAPER—THREE HOURS.

(Only SEVEN questions may be attempted.

Wherever possible all alternating E.M.F.'s, Currents, Fluxes, etc., are to be represented graphically by waves or by vectors in the customary manner.)

1. Define inductance, self-inductance and mutual inductance of an electric circuit. How does the self-inductance of a coil vary with the number of turns in the coil?

A circular coil with 600 turns has a resistance of 30 ohms and a self-inductance of 0.05 henry. Four such coils are connected in parallel. What will be the effective resistance, self-inductance and impedance of the set of coils? If an alternating E.M.F. of 100 volts and frequency 50 be applied at the terminals of the four coils, what will be the current and the power factor of the circuit?

2. If an alternating current  $i = I_0 \sin \omega t$  be flowing in an inductive circuit of ohmic resistance  $r$ , self-inductance  $L$  and capacity  $K$ , show, without using Integral Calculus, that the E.M.F. which must be applied at the terminals of the circuit to maintain this current is

$$e = E_0 \sin(\omega t + \phi),$$

$$\text{where } I_0 = E_0 / \sqrt{r^2 + \left(\omega L - \frac{1}{\omega K}\right)^2} \text{ and } \tan \phi = \frac{\omega L - \frac{1}{\omega K}}{r}.$$

An alternating E.M.F. of 100 volts and frequency 50 is applied at the terminals of an electric circuit of resistance 5 ohms, self-inductance 0.636 henry. What must be the capacity of the circuit if the power factor is unity? What will be the current in the circuit and the difference of potential between the terminals of the resistance, inductance and capacity respectively?

3. Determine the reactance of a single phase A.C. transmission line 10 kilometres long when the diameter of each wire is 0.8 cms. and the wires are 100 cms. apart. The frequency of the applied E.M.F. is 25.

If the specific resistance of the transmission line is  $1.8 \times 10^{-6}$  ohms per cm. cube, what is the ohmic resistance of the line? An alternating E.M.F. of 10,000 volts and frequency 25 is impressed on the line at the generating station, find the drop of potential in the line, the energy wasted in the line and the phase relation of the E.M.F. and the current at the generating station when a current of 50 amperes is flowing into a non-inductive circuit at the receiving station.

4. How would you determine, experimentally, the iron losses in a single phase core transformer for varying flux densities and constant frequency? How would you approximately separate the total iron loss into the hysteresis and eddy current components? What effect has the above iron loss on the "no load" transformer current?

5. The following data for a 40 K.V.A., single phase, oil cooled, lighting, core transformer are given.  $E_1 = 3120$  volts;  $E_2 = 230$  volts; frequency = 50;  $B_{max} \leq 6000 \frac{\text{lines}}{\text{cm}^2}$ ; primary ampere turns per cm.

length of core  $\leq 100$ ; current density  $\leq 0.75 \frac{\text{amps.}}{\text{m/m}^2}$  and  $0.90 \frac{\text{amps.}}{\text{m/m}^2}$  in the H.T. and L.T. windings respectively and the ratio of mutual flux to primary ampere turns is 56.

Determine the cross section and length of the magnetic circuit, the number of turns in, and suitable dimensions of the H.T. and L.T. windings and the approximate efficiency at full load current. The power factor is 0.9.

6. Describe carefully by means of diagrams the customary three phase alternate current, generator, armature windings. What are the relative advantages of the star and mesh connections respectively? Prove that the power in a balanced or unbalanced 3-phase circuit may be measured by means of two watt meters, and show that, under certain conditions of loading in a balanced 3-phase circuit, the indications of one of the watt-meters may become zero and even negative. What is the power factor of the circuit at which the above reading becomes zero?

7. Prove that in a polyphase generator the armature currents give rise to a M.M.F. which is rotating at synchronous speed relatively to the armature. How may this rotating M.M.F. be combined with the field M.M.F. to give the resultant flux interlinked with the armature windings? How would you deduce the load characteristic ( $I = \text{const.}$ ,  $\cos \phi = \text{const.}$ , and  $E_T$  variable) from the "no load" characteristic?

8. State what conditions must be fulfilled before two A.C. generators may be connected in parallel. Discuss the effect of the type of prime mover on the parallel running of the alternators, and show how the equalising current tends to keep the machines in parallel.

9. Show by means of diagrams the similarity of the polyphase, asynchronous motor to the ordinary stationary transformer; hence show the phase relationships of currents, E.M.F.'s and fluxes, (a) under running conditions, (b) at standstill with rotor short circuited, (c) at standstill with resistances inserted in the rotor circuit.

What is the advantage of this additional rotor resistance?

10. Show how the efficiency of an induction motor may be deduced from the open circuit and short circuit tests? How might a circle diagram, giving input, torque, slip, etc., be constructed from these tests? Discuss the assumptions involved in the construction of this diagram.

## NAVAL ARCHITECTURE.

### STABILITY AND ROLLING—TWO HOURS AND A HALF.

(EIGHT questions only to be attempted.)

1. A vessel 100 feet long has a uniform cross-section of the dimensions and shape given in the figure. The height of  $G$  is 3 feet. Find the volume of the correcting layer and the righting moment when the vessel is inclined  $45^\circ$ ; displacement unaltered.

2. Prove that the motion of the third wheel of the integrator is a function of the moment of inertia of the area traced over.
3. Make a sketch roughly to scale, of the statical stability curves for a large passenger and cargo vessel in the following conditions: (a) Launching, (b) Light, (c) Fully loaded, (d) Fully loaded coal out, (e) Same as d but water ballast in.
4. Give the corresponding values of  $GM$  for each condition.
- 4a. Sketch the isoclines and isovols for a right cylindrical vessel, circular cross-section axis horizontal, and deduce the equations to the corresponding curves for a similar vessel with an elliptical cross section.
5. Given the  $GZ$  curve and position of  $G$ , show how to construct the corresponding metacentric evolute.
6. The longitudinal and transverse  $BM$ 's of a vessel are 398' and 8' respectively. Find the  $BM$  corresponding to an inclination in a vertical plane  $30^\circ$  to the middle vertical plane of the vessel.
7. Obtain an expression giving the vertical shift of  $B$  for an irregular body inclined through an angle  $\theta$  in a given direction.
8. Describe fully any method of obtaining a set of  $GZ$  curves for a small vessel which has large weather-tight deck erections.
9. Discuss the conditions affecting the rolling of a vessel fitted with water chambers.
10. A model arranged to swing freely like a pendulum is fitted with an apparatus to lessen rolling, and the amplitudes of each successive roll are observed. Show by equations how to estimate the work done by the apparatus against the rolling.
11. Write the equations and deduce the periods for resisted and un-resisted rolling.
12. Give the equations governing the conditions for the steadiness of motion of a diving submarine moving along a horizontal course, rudders deflected downwards.

## RESISTANCE, PROPULSION, AND WAVES—TWO HOURS AND A HALF.

(EIGHT questions only to be attempted.)

1. Describe the conduct of a speed trial. What observations can be made? Sketch and describe the curves on a speed diagram.
2. Explain the modern theory of resistance, and give an account of the late Dr. Froude's researches in frictional resistance.
3. A vessel of 2000 tons displacement, and dimensions  $250 \times 34$  and 14' draft, does 15 knots for 2000 I.H.P. Find the wavemaking resistance at that speed. Assume a propulsive coefficient of .58.
4. Describe Froude's "constant" system of notation. Make a sketch so as to show the principal features of an Iso  $K$  diagram.
5. What is the effect of depth of water upon the speed of a vessel. State the deductions that have been made from recent experiments with vessels in shallow water.

6. Describe fully the method of experimenting with models and model propellers so as to find the "thrust deduction" and the "wake effect."

7. Sketch, roughly to scale, the  $S$  and  $E$  curves for similar propellers, with (a) 2 blades, (b) 3 blades, (c) 4 blades. Explain how a final diagram giving curves of the best values of  $P$ ,  $E$ , and slip in terms of  $S$  is obtained.

8. Show how Taylor's formula for propellers is deduced. How can this formula be applied to a propeller working behind a vessel?

9. Give some of the results of Froude's experiments on hollow  $v$ . straight lines.

10. Prove the formula for a trochoidal wave  $r = r_0 e^{-\frac{r}{K}}$ . State clearly what is  $Y$ .

11. Derive the formula giving the energy of a wave.

12. Describe the wave systems surrounding a vessel moving through the water. What rate of expenditure of energy is necessary to maintain the systems.

### STRENGTH—Two Hours.

(Eight questions to be attempted.)

1. Sketch a midship section of any type of sea-going vessels and give approximate scantlings.

2. Prove the formula giving the stress at any point of the section when the vessel is inclined to the vertical.

3. State clearly all the assumptions that are made in a calculation to find the stresses in a vessel and in finding the maximum bending moment in any condition.

4. In the case of the experiments on H.M.S. Wolf, describe the two methods by which the modulus of elasticity was determined.

5. Show how to calculate the maximum heave of a vessel due to the passage of a series of uniform waves.

6. A rectangular vessel 20' broad and 10' deep has  $\frac{1}{2}$ " plating at the sides and top, and  $\frac{3}{4}$ " plating at the bottom. Find the position of the neutral axis when the vessel is inclined  $30^\circ$  to the upright.

7. Show how to construct a series of trochoidal sub-surfaces.

8. A rectangular vessel 100' long  $\times$  30' broad, and weighing 200 tons, is loaded as shown—60 tons uniformly distributed over 10' at after end and 200 tons uniformly distributed over 70' at forward end. Find the maximum bending moment.

9. Give an account of the properties of mild and of high tensile steel, and describe how the latter is worked into a vessel's structure.

10. Give the formulae that may be applied to determine the resistance of a column to crushing.

11. Show how to find the pressure on any of the keel blades on which the vessel is resting, assuming the vessel to be rigid.

## CALCULATIONS—TWO HOURS AND A HALF.

(EIGHT questions to be attempted.)

1. Find the volume and position of c.g. of the solid formed by revolving the curve  $y = cx^3$  about the axis  $OX$ . Limits for  $x$  being  $H$  and  $h$ .

2. Prove Tchelycheff's rule for 3 ordinates.

3. Find the displacement and v.c.b. and L.C.B. of the form given :  
Longitudinal interval = 27 ft. Vertical interval = 2 ft.

SEMI-ORDINATES IN FEET.

wl/sect.	1	2	3	4	5	6	7	8	9 AP
wl 1	7	8.0	14.7	18.8	20.1	19.8	18.4	14.4	2.9
wl 2	5	6.8	13.8	18.3	19.9	19.7	17.8	11.8	2.8
wl 3	3	5.8	12.6	17.5	19.3	19.0	16.6	8.4	2.2
wl 4	0	4.5	10.8	15.8	17.7	17.4	14.0	4.8	1.9
wl 5	0	2.7	7.3	11.4	13.6	12.8	8.7	2.0	.7

4. Define tipping and lifting. Illustrate by diagrams. What means may be adopted to lessen tipping or lifting. Give values of the tipping factor.

5. Show how to obtain a curve giving the height of the c.g. of ship and cargo, deadweight constant.

6. Describe fully how the G.R.T. of a vessel is measured. Give figures for  $\frac{N.R.T.}{G.R.T.}$  for different types.

7. Give a description of the different classes of merchant vessels and show how the rules of Lloyd's Register affect the scantlings of the various classes.

8. A submarine of 200 tons displacement and 1.5 G.M. has an area flooded by water 20' in length and 10' broad. Find the G.M., transverse and longitudinal, after flooding.

9. A vessel has a permanent list of  $10^\circ$  to starboard. She is brought to the upright by a weight of 10 tons placed on board to port 18 ft. from the middle line. Find the G.M. Displacement = 1500 tons.

10. A vessel of 12,000 tons weight and whose area of waterplane is 20,000 sq. feet passes from fresh water at 35.6 cub. ft./ton to salt water. Find the change in draft.

11. Show how to derive an equation in terms of  $B$  to satisfy the requirements of deadweight, carrying, speed, etc., on a specified draft.

12. Describe how to design a set of lines. Dimensions  $C_B$ , etc., given.



## MARINE ENGINEERING.

## FIRST PAPER—Two Hours.

(THREE questions to be answered.)

1. Describe how to calculate the 'heating surface' and 'grate area.' Give figures for the ratio of HS to GA and of GA to I.H.P. for different types.
2. Make a longitudinal section sketch of a furnace and combustion chamber, showing their connections to the shell.
3. Sketch and describe Howden's system of forced draft.
4. Compare the advantages of cylindrical with w.t. boilers. Give approximate figures for the weight of boiler/I.H.P. for the different types of w.t. boilers.
5. Sketch and describe the Babcock & Wilcox boiler.
6. Sketch a suitable boiler arrangement for a fast T.B. Destroyer. Give a short description of any type of boiler adapted for burning oil.
7. Sketch an oval valve diagram, and show how to determine the occurrences during a complete revolution.
8. Describe the operation of taking cards during the trial run. Show how to deduce the I.H.P. and how to make a combined diagram from the cards for a 4-cylinder engine with 2 L.P.'s.

## SECOND PAPER—Two Hours.

(THREE questions to be answered.)

1. Calculate suitable sizes of cylinders for an engine of 6000 I.H.P. The vessel is a slow cargo vessel; single screw. Give the values you assume in making the calculation.
2. Calculate the sizes of the shafting for the above engines.
3. Make a sketch of an H.P. piston, showing the details in section.
4. Given the I.H.P. and revolutions, describe fully how to determine the most suitable propeller.
5. Prove that reciprocating masses can be treated in exactly the same way as revolving masses. What conditions should be fulfilled by a well-balanced engine?
6. Describe with the aid of sketches the blading of a turbine. Show what is the effect of the angle of the blades on the passage of the steam.
7. Derive the equation to the curve of pressures if the expansion law is  $pv^{1.1} = \text{constant}$ .
8. The dimensions of a turbine are known, and the steam consumption, pressures, and vacuum are noted. Show how to find the velocity of the steam at any stage or row.

## ELECTRICITY, PURE AND APPLIED—

TWO HOURS AND A HALF.

1. State clearly what you understand by "tubes of force" and "flux of force." Prove that the flux which traverses a closed surface is zero when this flux proceeds from a charge  $q$  outside the surface, and that it is  $4\pi q$  when it proceeds from a charge  $q$  inside the surface.

Using this theorem prove that the force due to a uniform spherical surface distribution is zero at a point internal to the surface, and is at any external point the same as if the distribution were collected at the centre of the spherical surface.

2. Distinguish between magnetic force and magnetic induction in a magnetisable substance. Prove the relation  $B = H + 4\pi I$ .

Describe the magnetometric method of examining the magnetic quality of a specimen in the form of a rod.

Give some account of the Heusler alloys.

3. State Kirchhoff's laws for the distribution of steady currents in a network of conductors.

Two batteries (E.M.F.'s,  $E, E^1$ ; internal resistances  $r, r^1$ ) are connected in parallel. Find an expression for the potential difference between the terminals of the compound battery so formed.

4. Give the elementary theory of the ballistic galvanometer.

How would you employ a ballistic galvanometer to determine the coefficient of self-induction of a coil?

5. What electromagnetic instruments are available for use in alternating current circuits? Describe the electro dynamometer and the wattmeter of Siemens.

Give the theory of the wattmeter as ordinarily employed to measure the rate of working in an alternating circuit.

6. A Leyden jar contains a charge  $Q$  of electricity. The coatings are connected together through a coil of resistance  $R$  and self-inductance  $L$ .

Find an expression for the charge after time  $t$  in the case where  $R^2 < \frac{4L}{C}$ . Hence show that the discharge is oscillatory, and find the period.

$C$  = capacity of condenser.

## METALLURGY—THREE HOURS.

(Answer SIX questions.)

1. What are the constituents of gaseous fuels, and how are they determined?

10 c.c.s. of a mixture of hydrogen, methane and nitrogen are mixed with 100 c.c.s. of air, and a spark is passed: the volume after cooling is 93.5 c.c.s., and after treatment with caustic potash this is reduced to 87.5 c.c.s. Calculate the composition of the gas.

2. An auriferous pyrites contains 2 oz. of gold per ton and very little silver. Describe in detail the method you would use for the industrial extraction of the gold.

3. What do you know of the grading of pig-iron in this country?

Show how the composition varies with the grade, and state what circumstances control the quality of iron coming from a blast furnace. What kind of iron would you use for the Puddling process?

4. State shortly the method of analysing a sample of coke, and discuss the influence of impurities, porosity and hardness on its suitability for use in the blast furnace.

5. Indicate the methods that are used for extracting lead from its ores and describe the principles and practical working of the Parkes process.

6. Describe the American method of smelting copper ores in the blast furnace, and explain the reactions which take place. Make a rough sketch illustrating the construction of the furnace.

7. Sketch a Siemens regenerative gas furnace and explain the method of working it. What materials are used for the construction of the arch and hearth of the furnace?

8. You are required to show graphically the rate of cooling of a molten metal. Explain the method of doing this, giving a sketch of the apparatus you would use and explaining the principles on which it acts.

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## MINING ENGINEERING.

### FIRST PAPER—THREE HOURS.

1. Under what circumstances would you employ "Cast Iron Tubbing" in lining a mine shaft? How would you determine the necessary thickness of the plates?

2. Describe in detail the method you would adopt in order to prove a mineral field by means of boring.

3. Calculate the size of winding engines for an output of 1000 tons per day of 8 hours from a mine 500 yards deep, assuming the average steam pressure at the engines to be 85 pounds per square inch.

4. Determine the size of a Guibal fan to circulate 150,000 cubic feet of air per minute with a water gauge of  $2\frac{1}{2}$  inches.

5. What are the chief gases met with in coal mines? Give their properties, and explain:

(a) From what sources they are given off into the workings.

(b) How their presence may be detected.

(c) What dangers may be brought about by their presence.

6. An airway 9 feet by 7 feet and 400 yards long, passing 75600 cubic feet of air per minute, is divided into four separate splits as follows: 1st split, 7 feet by 6 feet and 1200 feet long; 2nd split, 6 feet by 6 feet and 900 feet long; 3rd split, 6 feet by 4 feet and 840 feet long; 4th

split, 5 feet by 5 feet and 625 feet long. With the same total volume what quantity will pass into each split, and what will be the water gauge?

7. How would you proceed to determine the efficiency of a ventilating fan, and what precautions would you take in order to ensure accuracy?

8. Describe fully any good form of winding detaching hook, pointing out its chief merits.

### SECOND PAPER—THREE HOURS.

1. What is the cause of the rapid decay of wood in the return airways of a mine? What methods have been proposed to prevent such decay?

2. Compare the advantages and disadvantages of gunpowder as against one of the modern nitrate of ammonium explosives for use in coal mines.

3. What in your opinion is the necessity for testing the atmosphere of a coal mine for small percentages of inflammable gases, say down to .5 per cent., and what method do you consider best for the purpose?

4. Show by calculation how you would determine the size, weight, and thickness of cast iron pipes for pumping purposes.

5. What factors would you take into account in determining the size of an electrically driven pump to deal with a given quantity of water from the dip workings of a mine?

6. Discuss the advantages and disadvantages of coal cutting machines as compared with manual labour.

7. 300 tons of coal require to be hauled per day of 8 hours, by endless rope along a roadway 1000 yards long, dipping 1 in 20. If the speed is to be 2 miles per hour, steam pressure 50 pounds per square inch, and driving pulley 7 feet in diameter, what size of engines would you require?—the tubs or hutches to weigh 5 cwts. and carry 10 cwts. of coal. Also find the Horse Power of an electric motor with an efficiency of 70 per cent. to do the same work.

8. In the choice of a safety lamp for use in mines to what points would you devote special attention?

### THIRD PAPER—THREE HOURS.

1. What are the respective advantages and disadvantages of "stoop and room" and "longwall" methods of working coal seams, and the circumstances which would guide you in selecting either method?

2. How would you lay out the workings of a mine known to be liable to spontaneous combustion, and what steps would you take from time to time to prevent it? State how you would deal with a gob fire, and what causes have been assigned for the spontaneous ignition of coal mines.

3. What methods are used in the systematic working of mineral veins, and what conditions are best suited for each method?

4. Describe, with some illustrations, the different classes of machines used for breaking, crushing, and grinding minerals before dressing.

5. Describe the round buddle and some of the newer slime-dressing machines developed from it.

6. How would you arrange the direction of a longwall working face having regard to the inclination and cleavage planes of the seam?

7. Under what conditions are minerals obtained by open work, and when should open work cease and mining commence?

8. Describe some type of rock drill driven by compressed air.

### C.—IN AGRICULTURE.

#### FIRST EXAMINATION.

MATHEMATICS—See pp. 573-576.

NATURAL PHILOSOPHY—See pp. 576-580.

CHEMISTRY—See p. 582.

BOTANY—See p. 583.

ZOOLOGY—See p. 685.

#### FINAL EXAMINATION.

### AGRICULTURE AND RURAL ECONOMY.

#### THREE HOURS.

1. What is meant by a rotation of crops? What are the advantages of rotation? State your opinion of the following arrangement of crops for a rotation: (1) barley, (2) seeds, (3) wheat, (4) turnips, (5) potatoes, (6) oats. Point out the faults (if any) in this rotation, and state what you would consider a better arrangement of the same crops, and for what kind of soil your rotation would be suitable.

2. State the merits and defects of Italian and perennial ryegrasses respectively as constituents of mixtures of seeds, for temporary, and for permanent pasture. What are the special uses of clovers in pastures, and which clovers are commonly grown in them? State what quantities of (1) Italian ryegrass, (2) perennial ryegrass, (3) red clover, (4) and white clover respectively, you would include in mixtures for a (a) one year's hay, (b) one year's hay and two years' pasture, (c) permanent pasture.

3. State what pure breeds of cattle or crosses you would prefer for the following purposes: (1) for house fattening in winter, (2) for summer fattening on pasture, (3) for grazing on exposed mountain pasture, (4) for production of butter, (5) for production of cheese. Mention two breeds only in each case.

4. Describe how you would manage a lot of lambs from the time of weaning until they are made fat the following spring. State the quantity and kinds of supplemental or concentrated food you would allow them at different stages, stating the cost per ton of each kind of food. What increases in live and dead weight would you expect them to make? Estimate the money return you would expect to make for their keep.

5. Describe in detail the cultivation of a turnip crop from the time the land is ploughed in autumn until the crop is ready for consumption. Specify the kinds and quantities of manures you would apply, noting the cost of each. What are the diseases to which the turnip crop is liable, and what are the best preventives of each?

6. Give a detailed description of the management of an Ayrshire dairy herd. State approximately the average quantity of milk per cow you would expect, and if the milk is manufactured into butter and cheese, what price you would expect to realise from each. Mention on what diet you would feed a cow at different seasons.

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### AGRICULTURAL CHEMISTRY—THREE HOURS.

*(Only six questions to be attempted.)*

1. A good well-drained calcareous loam has the following manures applied to it: Superphosphate, Kainit, Nitrate of Soda, and Sulphate of Ammonia. State, with reasons, what constituents of these manures you would expect to find carried away by the drainage water in a wet season, (a) on land under a growing crop, (b) on bare fallow.

2. What is meant by "available" as distinguished from "total" plant food in a soil? Mention any insoluble form in which Potash might be present. How is the available phosphoric acid in a soil determined?

3. Describe how you would determine the "Crude Fibre" or the "Albuminoids" in a sample of Decorticated Cotton Cake. How would the addition of ground cotton seed hulls to the Cake affect the analysis?

4. What are the most important manurial constituents of animal excreta? Which of these constituents occur more abundantly (a) in the liquid excreta and (b) in the solid excreta?

5. Compare Decorticated and Undecorticated Cotton Cakes as to food and manurial values. Give their approximate composition and mention any points of importance, besides chemical composition, in determining their value.

6. What do you understand by the term "Humus"? What is known of the chemical composition and properties of humus and of its relation to plant nutrition? What conditions are favourable to its formation and decomposition respectively?

7. What is the average composition of cow's milk, and which of the constituents are most liable to variation? Describe the processes of "Pasteurisation" and "Sterilisation" respectively, and mention the arguments in favour of and against these methods which have been brought forward.

## VETERINARY HYGIENE—TWO HOURS.

(FOUR questions only to be answered.)

1. State what in your opinion would be a safe and sufficient daily ration of nitrogenous and non-nitrogenous food for a draught horse doing hard work, using oats, beans, maize, and hay. What quantities respectively would you give? How often daily would you feed the animal? How should the food be prepared?

2. What is meant by cubic space? How would you calculate the cubic space in a stable having the ordinary sloping-ridge roof? What minimum cubic space would you allow for a horse and an ox respectively?

3. Discuss the position of a farmer who sends to market the carcase of a doubtfully sound animal, and show how he may safeguard himself from prosecution in the event of the carcase being condemned.

4. Discuss the advisability of breeding from an animal suffering from any of the following diseases, viz.: (a) Shivering, (b) Stringhalt, (c) Sidebone, (d) Ringbone, and (e) Roaring. State in your own words what you understand these diseases to be, and give reasons for your views regarding breeding.

5. What is Anthrax? What does the law require when a case has been detected, (a) regarding the carcase of the animal, and (b) the place where it lived? What preventive measures may be adopted to prevent the spread of the disease (a) from place to place, and (b) from animal to animal?

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## AGRICULTURAL BOTANY—THREE HOURS.

1. Give a full account of the Potato, its origin and natural affinities, its cultivation and diseases, together with a physiological and morphological description of the tuber.

2. Discuss the importance of the tubercles of the Leguminosae; describe their structure and how they are initiated.

3. Give a full account of Cuscuta.

4. Give an account of the movements of water in vascular plants.

5. Give an account of Exoascus (*Taphrina*) and some of the diseases caused by it.

6. Describe the flowers of *Eriophorum* and of *Carex* and explain how these come to be in the same natural order.

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## AGRICULTURAL ENTOMOLOGY—THREE HOURS.

1. Give an account of the life histories of:

(a) *Aphis*.

(b) *Tipula*.

(c) *Melolontha vulgaris* (cockchafer).

2. How is respiration performed in insects? Give a description of the structures involved.
3. How would you distinguish the larvae of :
  - (a) *Lepidoptera*.
  - (b) *Coleoptera*.
  - (c) *Hymenoptera*.
4. What would you do to get rid of :
  - (a) Turnip Flea Beetle, *Haltica nemorum*?
  - (b) Cabbage-root Fly, *Anthomyia brassicae*?
  - (c) Winter Moth, *Chimatobia brumata*?
5. Give an account of the life history of the horse bot.

## AGRICULTURAL ENGINEERING—Two Hours.

(Not more than SIX questions are to be attempted.)

1. State and prove the principle of the steelyard.  
 In a steelyard  $ACGB$ ,  $C$  is the fulcrum,  $G$  the equivalent centre of gravity of lever and scale pan, and  $B$  the point from which the scale pan is suspended.  
 The weight of lever and scale pan being 10 lbs., the sliding weight 5 lbs., the distance  $CB$  1', and  $CG=0.3'$ , determine the points along the lever at which the sliding weight will balance loads of 0, 20 lbs. and 100 lbs. respectively in the scale pan.
2. Define "work," "energy," and "power"; give examples of each, and state the units in which they are usually measured.  
 A loaded railway waggon weighing 50 tons has wheels 3 feet in diameter and axle-journals 3" in diameter. If the coefficient of friction between axles and bearings = 0.02, determine, neglecting rolling friction and air resistance, the power required to draw the waggon along a level road at a speed of 40 miles an hour.
3. Sketch in section forms of pulley-rims suitable for the transmission of power by flat belts, cotton ropes, and by wire ropes respectively; and give the reasons for adopting these forms in practice.  
 For what purposes are guide pulleys used?
4. State Hooke's Law and define Young's Modulus of Elasticity.  
 A steel wire, 0.1 inch in diameter and 100 feet in length, on being acted upon by a pull of 100 lbs. was found to increase in length by 0.53 inch. What is the value of Young's Modulus for the wire?
5. Sketch and describe one of the following :
  - (a) A Weston Pulley Block.
  - (b) A Radial Inward-Flow Turbine.
  - (c) A Friction Brake.
6. Describe, with the aid of sketches, the construction and setting of a Lancashire boiler; and state the fittings with which the boiler is usually provided.



7. Describe the construction and working of any form of gas or oil engine with which you are acquainted, and sketch a circulating water system suitable for keeping the cylinder of the engine cool.

8. Describe briefly the principal features of a mowing machine, explaining how the knife receives its motion from the drive wheels and how the mechanism is thrown in and out of gear.

9. Compare and contrast the action of a plough with that of a spring tine cultivator, and sketch a suitable arrangement for applying the pressure to, and for raising, the tines of the latter implement.

10. Describe, with the aid of sketches, the construction and action of one of the following :

(a) A Hay Tedder.

(b) A Disc Drill.

(c) A Wind Engine and pump.

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## D.—IN PUBLIC HEALTH.

### FIRST EXAMINATION.

#### PUBLIC HEALTH LABORATORY WORK.

##### TWO HOURS.

(FOUR questions only to be answered.)

1. Describe two different processes for the estimation of nitrates in potable waters. What is the basis of action of each respectively? What are the indications as to pollution when (a) nitrates only, (b) nitrates with nitrites, and (c) both along with excess of free and albuminoid ammonia are found?

2. Describe a method for the quantitative estimation of particulate matter in air. How would you proceed to estimate the number of micro-organisms per litre of air, and to determine their nature?

3. What methods are in use for the determination of oxygen in solution in water samples? Describe one of them fully. Discuss the value of these processes, and the significance of deviations from the normal of dissolved oxygen.

4. Name some of the preservatives illegally used in milk. Give in detail a process for the estimation of one of these. How far is their use a menace to health? What plea may be set forth for their reasonable use in milk imported into towns?

5. Name some of the chief pathogenic diplococi. State the diseases with which they are associated. Give an account of their physical and cultural differences, and of their distribution in the bodies of those affected.

## ANALYTICAL WORK.

1. Estimate quantitatively in the sample of water provided (*A*) the constituents necessary to enable you to give an opinion as to its fitness for domestic and potable purposes.

2. You are required to estimate quantitatively the carbon dioxide gas in the air of the laboratory, making the necessary corrections for temperature and pressure. Show your working in detail.

3. Estimate (*a*) the total solids, and (*b*) the fatty solids, in the sample of milk provided (*A*) by the Werner-Schmidt and Leffmann-Beam methods.

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BACTERIOLOGY.

1. Stain the organisms supplied by Gram's method. Demonstrate result to examiners. Give a list of the organisms which stain by this method.

2. Stain the organisms supplied for spores by any method you prefer. Describe the method, and demonstrate the result.

3. Examine the sample of sputum provided for organisms. Stain appropriately. Describe what organisms you find. Name the disease, if possible, from which the patient is suffering.

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FINAL EXAMINATION.

## SANITATION—Two Hours.

1. *Water filtration.*

(*a*) Describe an installation for the mechanical filtration of the water supply of a town of 10,000 inhabitants.

(*b*) Contrast the results of such filtration with those of ordinary sand filtration.

2. *Sewage treatment.*

(*a*) In the biological treatment of sewage, what should be the size of the septic tank relatively to the total daily amount of sewage, and why? Describe exactly what you consider the best plan of such a tank.

(*b*) State three methods of distribution of sewage over bacterial beds or so-called filter beds. Discuss their merits and demerits, and explain what circumstances would make you prefer one or the other of them in any given case.

(*c*) What would be your requirements as to the purity of the effluent under different circumstances, and how would you determine whether the desired degree of purity had been attained?

3. State your reasons for believing that a damp house is injurious or dangerous to health.

## SANITARY LAW—TWO HOURS.

1. Compare the statutory public health powers of police burghs and district committees of County Councils, pointing out in what respects either is better off than the other, and in what respects there is no difference.
  2. What are in your opinion the weak points of the Rivers Pollution Prevention Acts, and what amendments would you recommend?
  3. For what purposes may bye-laws be framed under the Public Health (Scotland) Act, 1897, and what is the exact procedure required to legalise them?
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## VITAL STATISTICS—TWO HOURS.

(FOUR questions only to be answered.)

1. Discuss the bearings of infantile mortality on the statistics of a community directly and indirectly (1) with regard to relative rates, and (2) to differences of rates in different communities.
  2. What causes determine movements of population (*a*) within a country and (*b*) in communities? How may intercensal statistical data be thereby affected?
  3. How is the zymotic death-rate determined? What diseases are included in this rate? State approximately the present rates for (*a*) phthisis, (*b*) tubercular diseases, (*c*) scarlet fever, and (*d*) enteric fever.
  4. What are the values of the life-table of a community?
  5. Discuss how far the present method of estimating the birth-rate is likely to give comparable results in different populous places. Can you suggest any other and better method? If so, give reasons therefor.
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## MEDICINE IN RELATION TO PUBLIC HEALTH.

TWO HOURS.

(FOUR questions only to be answered.)

1. Discuss generally the result of isolation hospital treatment on the prevalence of scarlet fever, and its bearing on "return" cases. Suggest the probable channels of infection in these cases. How might they be prevented?
2. What are the principles underlying (*a*) the serum and (*b*) the vaccine treatment of infective diseases? Name some of the diseases of (*a*) man and (*b*) of animals which are so treated curatively or preventively. Show generally how far these forms of treatment have been successful.
3. Give the life history of the haematozoon of quartan malarial fever in (*a*) the mosquito and (*b*) in man. What measures ought to be adopted in malarious districts relative to the prevention of the disease?

4. Discuss the question of the infectivity of pneumonia generally, and of forms of pneumonia particularly, in its bearings, especially on prevention.

5. Describe a typical case of malignant pustule. How may it be produced in man? What treatment ought to be adopted?

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## IV.—FOR DIPLOMA IN EDUCATION.

### GENERAL PAPER—THREE HOURS.

*(Only FIVE questions to be answered.)*

1. To what extent is the correlation of studies possible or advisable in the elementary school? Illustrate your answer by a model scheme of work for a supplementary class.

2. What in your opinion is the best method of teaching (*a*) simple subtraction, (*b*) proportion? Illustrate your answer and carefully state your reasons as you proceed.

3. What do you regard as the main value of nature study in the elementary school, and what dangers are to be avoided?

4. From the disciplinary point of view examine the claims of manual instruction as an educational agent.

5. Indicate the main objections to the concentric method of teaching history. How far are these objections valid?

6. Whether would you deal with the political or the physical geography of a country first, and why? Illustrate your answer.

7. What are the main points to be kept in view in the classification of pupils in the elementary school? To what extent would you classify (*a*) by proficiency in individual subjects, (*b*) by general proficiency?

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## TEACHING IN SECONDARY SCHOOLS.

### CLASSICS—THREE HOURS.

*(Only FIVE questions to be answered.)*

1. Discuss the statement that training in English is the first and most important reason for studying Latin.

2. Indicate the value and limitations (if any) of the direct method of teaching Latin.

3. It has been urged against present-day teaching of Latin that there is failure to grasp the narrative or argument of a writer in its continuity. How far is this criticism just, and what remedy would you propose?

4. What do you regard as (a) the best method of teaching Latin or Greek composition, (b) the main purpose of its study?
  5. What are the fundamental difficulties in the reading of Latin verse, and how would you attempt to obviate them?
  6. What, in your opinion, is the most suitable work for first reading in Greek, and why?
  7. "The *Protagoras* is admirably adapted for the first reading in Plato." Critically examine this statement.
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## FRENCH AND GERMAN—THREE HOURS.

(Only FIVE questions to be answered.)

1. "Reading must be rapid. A mistaken sense of 'thoroughness' may cause the waste of much time." Critically examine this as applied to the teaching of French and German.
  2. "Grammatical abstractions should not be forced upon the pupil too early." Discuss this, and expand your answer into a discussion of the general question of the place of formal grammar.
  3. Indicate the place, value, and limitations of the perception-method of modern language instruction.
  4. What use would you make of *reading in unison* in the teaching of modern languages, and with what main object?
  5. "Paradigms ought by all means to be given, but should never be learned by heart in rigmarole-fashion." Critically examine this statement, carefully illustrating your answer.
  6. Discuss the place and value of Phonetics in the treatment of the pronunciation of French.
  7. In introducing a class to a first lesson on the inflection of the German noun, to what extent would you vary your procedure according as the pupil had or had not already begun Latin?
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## ENGLISH AND HISTORY—THREE HOURS.

(Only FIVE questions to be answered.)

1. Indicate, with suitable illustrations, what you regard as the best method of studying any work of Chaucer, giving reasons for the method you adopt.
2. State the case for and against the use of paraphrasing in the teaching of Higher English.

3. "Language is fossil poetry." Explain and illustrate. In the study of a play of Shakespeare what proportion of time would you devote to the linguistic aspect?

4. "Shall grammar be taught?" Discuss this question fully with reference to the teaching of English in Secondary schools, and discuss the relative value of the Inductive and the Deductive methods of teaching grammar.

5. "Poetry gives life and reality to History." Critically examine this statement, and in terms of your conclusion show how you would correlate History and Poetry in the higher teaching of History.

6. Indicate the place and value of the Topical method of teaching History, illustrating your answer.

7. "History is the logic of events." Explain and exemplify, and, provided you accept the definition, what direction should it offer as to method?

8. Discuss the 'Source' method of teaching History, illustrating your answer by reference to a special period of English History.

9. "The main difficulty with existing methods of teaching History seems to be that the subject is treated as a record of dead facts and not as a living science." To what extent is this statement justified, and how would you propose to remedy present defects? Illustrate your answer.

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## MATHEMATICS—THREE HOURS.

*(Only FIVE questions to be answered.)*

1. From the disciplinary point of view indicate, with suitable illustrations, the place and value of memorised rules in the teaching of arithmetic.

2. What do you regard as the main difficulty in the teaching of square root? What method would you adopt?

3. Exemplify the use you would make of graphic representation in dealing with positive and negative principles in algebra. Where would you expect to find the greatest difficulty?

4. What do you regard as the main value of the study of geometry?

5. To what extent do you consider it feasible to carry solid geometry along side by side with plane geometry? Illustrate your answer.

6. State clearly, illustrating your answer, the method you would adopt in explaining to a junior class the principle involved in the process of multiplying by minus.

7. From the disciplinary standpoint compare the educational value of the new and of the Euclidean geometry.

## V.—FOR DEGREES IN MEDICINE AND SURGERY.

### I. PRELIMINARY EXAMINATION

#### ENGLISH—THREE HOURS.

*EIGHT, and not more than EIGHT, questions are to be answered. 1 and 2 must be answered, with either 3 or 4, and either 5 or 6. The remaining FOUR may be any questions not already answered.*

1. Write an essay, of from two to three pages, on one of the following subjects :

- (1) Spelling Reform.
- (2) Earthquakes.
- (3) The Sport of Mountain Climbing.

2. Paraphrase.

#### YOUTH'S AGITATIONS.

When I shall be divorced, some ten years hence,  
From this poor present self which I am now :  
When youth has done its tedious vain expense  
Of passions that for ever ebb and flow :

Shall I not joy youth's heats are left behind,  
And breathe more happy in an even clime ?—  
Ah, no, for then I shall begin to find  
A thousand virtues in this hated time .

Then I shall wish its agitations back,  
And all its thwarting currents of desire :  
Then I shall praise the heat which then I lack,  
And call this hurrying fever generous fire :

And sigh that one thing only has been lent  
To youth and age in common—discontent.

3. Give some account of any *four* of the following : Canute, The Norman Conquest, John's quarrel with the Pope, The Barons' War, The Black Prince, Wat Tyler, John Knox, Archbishop Laud, Marlborough, The Revolt of the American Colonies, The Indian Mutiny, The Solemn League and Covenant, Lord Palmerston.

4. Write short notes on any *four* of the following : The Venerable Bede, Edward I.'s relations with Scotland, James I. of Scotland, Battle of Sluys, Statutes of Provisors and Praemunire, The Lollards, The French Campaigns of Henry V., Henry VIII.'s breach with Rome.

The Spanish Armada, The Gunpowder Plot, The Exclusion Bill, Trial of the Seven Bishops, The Bill of Rights, Sir Robert Walpole, Catholic Emancipation, Waterloo, Wars with Afghanistan.

5. Locate and write a note on *six* of the following: Los Angeles, Muscat, Seoul, Baku, Ottawa, Otago, Brisbane, Fiji Islands, Tangier, Wiesbaden, The Jungfrau, Bordeaux, Trondhjem, Khartoum, Leghorn.

6. Write a description of the chief physical features, political divisions, and principal industries of South America.

7. Correct or improve the following sentences, giving reasons for the changes you make:

(a) There could be no doubt but what, taking all the circumstances into consideration, he acted quite friendly.

(b) Leonard de Courcy, a young man of a worthless character and who had just obtained a commission in the army, seemed to be very popular with every member of the family.

(c) Do not be too ready to believe strange stories from those whom you know are not the essence of sobriety and truth.

(d) A difficult place was met with on the descent in negotiating which one required to have all their wits about them.

8. Make a general analysis of the following passage, and parse the words in *italics*:

O who *that* shared them, ever shall forget  
 The emotions of the spirit-rousing time,  
*When* breathless, in the mart, the couriers met,  
 Early and late, at evening and at prime;  
 When the loud cannon and the merry chime  
 Hailed news on news, as field on field was won;  
 When Hope, long doubtful, soared *at length sublime*,  
 And our glad eyes, awake as day begun,  
 Watched Joy's broad *banner rise to meet* the rising sun!

9. Define and exemplify the terms *transitive verb*, *passive voice*, *common noun*, *gerund*, *adverbial clause*, *subordinating conjunction*. Enumerate the suffixes by means of which diminutives are formed in English, giving in each case an illustrative word.

10. Derive *six* of the following words: chivalry, blame, harbour, foreign, literature, cinder, pirate, disdain, sovereign, chain, ghastly, nightingale.

11. Give a short account of any *three* of the following: Duessa, Shylock, Comus, *The Ancient Mariner*, *Alexander's Feast*, *Esmond*, *Emma*, *Martin Chuzzlewit*, *Guy Mannering*, *The Idylls of the King*, *Balder Dead*, *The Eve of St. Agnes*, Falstaff, Will Wimble, Viola.

12. Write short explanatory notes on the following expressions: Responsible Government, Crown Colony, General Staff, Colonial Preference, Box the Compass, Cumulative Voting, Bed of Procrustes, Shibboleth, Robbing Peter to pay Paul, The Music of the Spheres.



LATIN.—See pp. 528, 529.

GREEK.—See pp. 531, 532.

MATHEMATICS.—See pp. 535, 536.

## FRENCH—THREE HOURS.

### I.

Translate into French :

(1) The two children had been eagerly expecting news of their uncle, whom they had not seen for a long time. Great was their surprise, therefore, when, seated at tea, they heard a knock at the door, and immediately their uncle entered. Shouting with joy, they ran to greet him, and were soon dancing round him, asking all sorts of questions, to none of which could poor uncle possibly reply. "Wait a little, my children," said he, "I have travelled many miles to-day, and am tired and hungry; when I have rested a while, I shall relate to you some of my adventures." Delighted with this promise, the children sat very quiet until tea was over. Then they brought the arm-chair close to the fire, and, as soon as he was seated, climbed upon his knees, impatiently demanding the promised tales.

- (2) (a) I have heard her say so herself.
- (b) Why have you made me wait so long?
- (c) I saw him approaching me.
- (d) Perhaps you are right, but I doubt it.
- (e) How pale you are! Have you a headache?

### II.

Translate into English :

(a) Pas une feuille ne murmurait; au loin, les bruits du village s'éteignaient un à un; le soleil avait disparu . . . Je m'endormis bientôt.

Or, il était nuit et la lune brillait de tout son éclat, lorsque je m'éveillai sans cause apparente. Les vagues parfums de l'été arrivaient jusqu'à moi. La douce odeur du foin nouvellement fauché imprégnait l'air. Je regardai tout surpris, puis je voulus me lever pour fermer la fenêtre; mais, chose inconcevable! ma tête était parfaitement libre, tandis que mon corps dormait d'un sommeil de plomb. A mes efforts pour me lever, pas un muscle ne répondit; je sentais mes bras étendus près de moi, complètement inertes . . . mes jambes allongées, immobiles; ma tête s'agitait en vain!

(b) Le berger ne recevait guère de lettres; il attendit, pour lire la sienne, d'être en plein champ avec le troupeau. Il ouvrit l'enveloppe,

et lentement, mot à mot, il déchiffra les nouvelles qui lui arrivaient de France à travers les mers. Il avait replié le papier, mis la lettre dans sa poche ; il restait immobile, assis sur une pierre, le regard fixe, et les mains sur ses genoux. Peu à peu ses yeux se remplirent de larmes : il cacha son visage sur ses bras croisés, et il pleura comme un enfant. Sa mère était morte, morte sans le revoir, mais en lui envoyant sa bénédiction, et en lui confiant sa jeune sœur qui restait désormais sans protecteur. Puis il regardait tout autour de lui avec un sentiment vague, mais profond, du charme de la liberté et de l'espace.

### III.

1. Give five sentences in French, with English translation, each containing one of the following : *avant, devant, vers, envers, depuis*.

2. Translate into French :

- (a) He was looking out of the window.
- (b) I shall arrive on Tuesday, the thirteenth of August.
- (c) I paid twelve francs for that picture.
- (d) They were trembling with anger.
- (e) I congratulate you on your success.

3. Translate into French :

- (a) He is a most pleasant companion.
- (b) My friend is happy, but I am much more so.
- (c) Have you more than twelve francs in your pocket ?
- (d) All the pupils write well, but this boy writes best.
- (e) He is older than his friend by two years.

4. Translate into French :

- (a) Are you not coming with us to-morrow ? Yes.
- (b) Take care they do not follow us.
- (c) Will you come to-morrow week ?
- (d) How difficult it is !
- (e) Where is the doctor ? Send for him.

## GERMAN—THREE HOURS.

(Candidates may use either English or German Script.)

### I.

1. Translate into German :

(a) I must have been a very simple little boy when I first went to school. A boy of the name Garnett took me into a cake-shop one day and bought some cakes, for which he did not pay. When we came out, I asked him why he did not pay for them, and he instantly answered : "Do you not know that my uncle left a large sum of money to the town on condition that every tradesman (*Ladenbesitzer*) should give whatever was wanted, without payment, to any one who wore his old hat and moved it in a certain way ?" and he then showed me how it was to be moved. He then went into another shop where

he was trusted and asked for some small article. He moved his hat in the proper manner, and he obtained it without payment. When we came out he said: "Now, if you like to go by yourself into that cake-shop, I will lend you my hat, and you can get whatever you like, if you move the hat properly on your head."

(b) (1) I have not been able to do it.

(2) He ought to have done it an hour ago.

(3) We had to remain in bed, as we were ill.

(4) When he came, I went away.

(5) When he has read the book, he will lend it you.

## 2. Translate into English :

(a) Im Anfange jedes Jahres kam zu uns ein schöner Jüngling, mit dessen Erscheinen die Natur ein anderes Gewand anzog. Die Blumen schossen unter seinen Tritten aus der Erde hervor, der Schnee floh unsere Berge, und die Vögel suchten ihre gewöhnlichen Ruheplätze wieder; ja sogar die Insekten und andere Tierchen krochen aus ihren Winterhöhlen hervor und nahmen ihre Arbeiten wieder auf. Der Wind wehte uns nicht mehr so heftig an, und die Waldbäche flossen ruhiger. Wir verschlossen uns jetzt nicht mehr in unsere Zimmer, um uns um den wärmenden Ofen zu setzen, sondern wir zogen hinaus ins Freie. Die Schwalben, welche in wärmere Gegenden geflohen waren, kamen wieder zurück, um ihre alten Nester zu bewohnen und diejenigen wieder auszubessern, welche durch das schlechte Wetter gelitten hatten.

(b) Am Abend eines heißen Sommertages saßen wir im Garten und sprachen von den Ereignissen des Krieges. „Es ist doch etwas Schreckliches um so einen Krieg!“ sagte Frau M. „Wie viele Mütter verlieren da ihre Söhne und wie viele Frauen ihre Männer. Und von vielen weiß man gar nicht, ob sie in der Schlacht gefallen sind. Sie sind bloß verschwunden und man weiß nicht was aus ihnen geworden ist. So ist es mir mit meinem guten Bruder gegangen. Er zog vor sechs Jahren in den Krieg und ist nicht zurückgekehrt. Sein Name war nicht in der Liste der Getöteten oder Gefangenen und——“. „Hier ist er,“ rief eine tiefe Stimme, indem ein Mann mit einem schwarzen Barte hinter einem Baume hervortrat. Frau M. stieß einen lauten Schrei aus und fiel in die Arme des Fremden, der wirklich ihr Bruder war.

## II. GRAMMAR.

1. Give the 3rd sing. pres., imperf., and perf. of : *beraten, sterben, wiederholen, erfahren.*
2. Give the comparative and superlative of : *bald, nahe, schlau, hoch.*
3. Decline in full the German for : *that beautiful bird, a whole week, new dress.*
4. Give nouns (with the definite article and meaning) derived from *jünger, treten, hoch, heiß.*
5. Translate :
  - (a) Our garden is behind the house.
  - (b) There are many flowers in the meadow.
  - (c) Do not go without me.
  - (d) Let us go into the house.

## SPANISH—THREE HOURS.

## I. Translate into Spanish :

(a) The downfall of Napoleon is an impressive lesson to ambition, and affords a striking illustration of the inevitable tendency of that passion to bring to ruin the power and the greatness which it seeks so madly to increase. No human being, perhaps, ever stood on so proud a pinnacle of worldly grandeur as Napoleon at the beginning of the Russian Campaign. He had done more, he had acquired more, and he possessed more, as to actual power, influence, and authority, than any individual that ever figured on the scene of European story. He had visited with a victorious army almost every capital of the continent, and dictated the terms of peace to their astonished princes. He had consolidated under his immediate dominion a territory and population apparently sufficient to meet the combination of all that it did not include, and interwoven himself with the government of almost all that was left. He had cast down and erected thrones at his pleasure, and surrounded himself with tributary kings and principalities of his own creation. He had connected himself by marriage with the proudest of the ancient sovereigns, and was at the head of the largest and the finest army that was ever assembled to desolate or dispose of the world. Had he known where to stop in his aggressions upon the peace and independence of mankind, it seems as if this terrific sovereignty might have permanently remained in his person.

- (b) I brought a letter and gave it to him.
- (c) Prosperity gains us friends, but adversity tries them.
- (d) I saw her, but I could not see him.

## II. Translate into English :

Con franca y liberal mano  
 Ha tratado á España el cielo ;  
 Juntando en ella los dones  
 Que repartió en otros reinos.

Clima templado y suave,  
 Ni muy rígido el invierno  
 Ni tan ardiente el verano  
 Que quite fuerza y aliento.  
 Puro el aire, el sol radiante,  
 El cielo claro y sereno,  
 Las corrientes cristalinas,  
 Fecundo y hermoso el suelo.  
 Los frutos mas estimados  
 Los da á la par su terreno,  
 Sin tener que ir en su busca  
 De la tierra á los extremos.

### III. Grammar :

(a) Write the present indicative and the present subjunctive of the verbs, *contar*, *crecer*, and *decir*.

(b) Compare the adjectives, *bueno*, *malo*, and *agradecido*.

(c) Write in Spanish the numeral adjectives 15 to 20 inclusive.

(d) Give the meaning of the following idiomatic expressions :

Acabo de oír eso.

¿Puede caber eso en tu imaginación ?

Caer en gracia.

### HEBREW—THREE HOURS.

1. Translate Genesis xxxvii. 5—14.

2. Parse רִיגַד (v. 5), וַיִּסְכֹּף (v. 5), קָמָה (v. 7), נִצְבָּה (v. 7), תִּסְבְּיָהּ (v. 7), וַתִּשְׁתַּחֲוֶה (v. 7), הִבִּיטָהּ (v. 10), וַיִּלְכְּדוּ (v. 12), לְרֵעִיתָהּ (v. 12), כָּבֵדָהּ (v. 13), וַהֲשִׁבֵנִי (v. 14), וַיִּשְׁלַחְהוּ (v. 14).

3. Prefix the Article with the proper pointing to the following :

עֶמֶל, עֵיר, תֶּרֶב, תָּבָא, תִּלְשָׁ, תִּרְיָם, הָר, הָמִין, אָכַן, אָוֶן.

4. Prefix חֵן with the proper pointing to the following :

רַע, אֲבִלִים, הַמִּיקִים, רַע.

5. Write the singular and plural of כָּתֵב with suffixes.

6. Write the first singular Imperfect of all the conjugations of כָּתַב and שָׁמַע.

7. Write the third singular masculine Perfect and Imperfect of שָׁמַע with suffixes.

### II. Point and translate :

וְאֶל־הָעָם הַזֶּה תֹּאמַר כֹּה אָמַר יְהוָה הִנְנִי נֹתֵן לְפָנֶיכֶם  
 אֶת־דֶּרֶךְ הַחַיִּים וְאֶת־דֶּרֶךְ הַמוֹת : הַיֹּשֵׁב בְּעִיר הַזֹּאת

ימות בחרב וברעב ובדבר והיוצא ונפל על-הכשדים  
 הצרים עליכם יחיה והיתה-ללו נפשו לשלל: כִּדְשִׁמְתִּי  
 פְּנִיבְעִיר הַזֹּאת לָרַעָה וְלֹא לַטּוֹבָה נֶאֱסִיחָה בִּיד מֶלֶךְ-  
 בָּבֶל תִּנָּתֵן וְשִׂרְפָה בָּאֵשׁ: וּלְבֵית מֶלֶךְ יְהוּדָה שָׁמְעוּ  
 דְּבַר-יְהוָה: בֵּית דָּוִד כֹּה אָמַר יְהוָה דִּינוּ לְבָקֶר מִשְׁפָּט  
 וְהִצִּילוּ גִזּוֹל מִיַּד עוֹשֵׁק פְּךְ-תֵּצֵא בָּאֵשׁ חֲמִתִּי וּבַעֲרָה וְאִין  
 נִכְבָּה מִפְּנֵי רַע מַעַלְלֵיהֶם: הֲנִי אֵלֶיךָ יִשְׁבֶּת הַעֵמֶק  
 צוֹר הַמַּיִשֶׁר נֶאֱסִיחָה הָאֲמֹרִים מִיִּדְּחַת עֲלֵינוּ וּמִי יִבּוֹא  
 בַּמַּעֲנוֹתֵינוּ: וּפְקַדְתִּי עֲלֵיכֶם כַּפְרִי מַעַלְלֵיכֶם נֶאֱסִיחָה  
 וְהִצִּתִּי אֵשׁ בִּיעֲרָה וְאָכְלָה כָּל-סִבְיָה:

III. Give the following in punctuated Hebrew :

Rabbi Nachman asked Rabbi Isaac to bless him ; and in reply he told him the following parable. A certain man was travelling in the desert, and was weary and hungry and thirsty. And he came upon a fruit-tree, whose fruit was sweet and its shadow pleasant, while a pool of water lay at its foot. So he ate of the fruit, and drank of the water of the pool, and sat down in the shadow. When he went on his way he said, Tree, tree, what blessing shall I pronounce upon thee ? If I should wish thee good fruit, hast thou not got it ? If I wish thee a pleasant shade, lo ! it is thine, and for a pool of water, here it is. Only in this one thing I will bless thee, that all the trees that are to be planted from thee may be like thee. So as for thee ; wherein shall I bless thee ? If in [the matter of] the Law, thou hast it as an ornament ; if in wealth, thou art already rich ; if in sons, thou hast them. Only would that all who are born to thee may be thy like !

## II. PROFESSIONAL EXAMINATIONS.

### I. FIRST PROFESSIONAL EXAMINATION.

#### BOTANY—Two Hours.

(Only FOUR of the questions are to be attempted for the First Professional Examination. All FIVE are to be attempted for the First B.Sc. Examination.)

1. Describe the structure and mode of development of the antheridium and archegonium of a Fern. Explain how fertilisation is effected in this plant.

2. What path does the transpiration current follow in the stem? How would you prove the correctness of your statement by experiments?

3. Explain what is meant by parasitism and saprophytism. Mention any causes that may predispose to infection in the case of any plant you choose.

4. Describe the structure of a foliage leaf, and explain how the structure of the different parts is related to the functional activity of the leaf.

5. Give a general account of the structure of the Gynaeceum in a Phanerogamic Flower.

## ZOOLOGY.

FOR MEDICINE—TWO HOURS; FOR ARTS AND SCIENCE—THREE HOURS.

(Candidates in Medicine are only expected to attempt FOUR (not more) questions in Section A. Candidates in Science and in Arts are expected to attempt FOUR questions in Section A and also TWO in Section B.

### A.

1. Describe the structure of a young proglottid and of a mature proglottid in a Tapeworm, and trace the migrations of a single individual from the egg to the sexually mature state.

Do Tapeworms have any methods of reproduction other than the sexual method?

2. Write a short account of the Cyclostomata.

3. Give an account of the maturation and fertilisation of an egg. Do any processes comparable with maturation occur during the development of the spermatozoa?

4. What do you know about Trypanosomes? What evidence is there of the close affinity of Trypanosomes to the Haemosporidia?

5. What are the more important characters of the Annelida? Comment on the structure of *Lumbricus*, the Polychaeta and *Hirudo* in illustration of your answer.

6. Give an account of the structure of one of the Calcispongiae. What are the distinguishing features of the Ascon and the Sycon types?

### B.

7. Describe the structure of a simple Ascidian. On what grounds are the Tunicata believed to be allied to the Vertebrata?

8. Give a short account of any evidence with which you are acquainted—derived from one of the following sources (a) Embryology, (b) Palaeontology, (c) Comparative Anatomy—that a process of evolution has taken place.

9. Define the following terms and give instances to explain the meaning of: *Recapitulation*, *larva*, *symbiosis*, *stomodaeum*, *amphicoelous*, *hyostylic*.

## PHYSICS—TWO HOURS.

(NOTE.—Do not attempt more than FOUR questions.)

1. Define a centimetre, a gramme, and a second.  
Express in ergs the kinetic energy of a body of mass 70 kilogrammes, moving with a velocity of 30 metres per second.
2. A quantity of air at 76 cms. pressure is allowed to expand to five times its original volume, the temperature being raised from 15° C. to 100° C. Calculate the final pressure.
3. Fluid is poured into a long cylindrical vessel of which the axis is vertical. Explain the rise in pitch of the note heard as the vessel fills up.
4. Draw careful diagrams to illustrate the passage of a pencil of white light through (1) a prism, (2) a plate of parallel glass. Why do we get chromatic effect in the first case and not in the second?
5. Describe the essential parts of a sensitive galvanometer. How would you use it to compare the electromotive force of two cells?
6. Draw a section of a Röntgen ray bulb. Mark the positive and negative electrodes and the region from which the radiation proceeds. What is the view generally held as to the origin and nature of the radiation?

## CHEMISTRY—TWO HOURS.

(Answer FOUR questions.)

1. Explain fully the meaning of the formula  $\text{CO}_2$ , and describe the method by means of which the gravimetric composition of carbon dioxide has been established.
2. Describe one method of preparing sulphur dioxide from sulphuric acid, giving a sketch of the apparatus you would use. State the properties and uses of sulphur dioxide.
3. State shortly the properties of mercury and the methods of preparing mercurous and mercuric chlorides from it. By what tests would you distinguish between corrosive sublimate and calomel?
4. Describe the method of preparing either acetic acid (from wood), or formaldehyde, and give an account of the properties and uses of the substance chosen.
5. How would you prepare (a) chlorine, from bleaching powder; (b) caustic potash, from potassium sulphate; (c) potassium iodide? Give equations.

## II.—SECOND PROFESSIONAL EXAMINATION.

## ANATOMY.

1. Define the extent of the third part of the subclavian artery and of the first part of the axillary artery, and describe the relations of each to veins, nerves and fascia.



2. Describe the arterial and nervous supply of the diaphragm, state the positions of the apertures by which the inferior vena cava, the aorta, and the oesophagus pierce it, and describe the walls of each of these apertures.

3. Describe the microscopic structures to be seen in a vertical section of a cerebral convolution, and state in what respects the structure is peculiar in the posterior lobe.

4. Describe the characters of the human ovary as observed with the naked eye, its situation and connections, its nervous and vascular supply, and also its original position in the embryo and the manner in which its position is subsequently altered.

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### PHYSIOLOGY—TWO HOURS.

(Only FOUR questions to be attempted.)

1. (a) What are the gases of the blood? (b) How may they be extracted and analysed? (c) How is each gas held in the blood? (d) How is each taken up by the blood and got rid of from the blood?

2. Compare the structure of the pancreas with that of the parotid gland. Describe the way in which the functional activity of each gland is governed.

3. What is meant by a *Perceptive Centre*? What is the evidence that Perceptive Centres connected with the various special senses are situated in different parts of the cerebral cortex?

4. Describe the mechanism by which sound waves in air are caused to stimulate the terminations of the auditory nerve, and explain the action of the mechanism.

5. Give an account of the structure, nervous arrangements, and functions of the iris.

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### MATERIA MEDICA AND THERAPEUTICS— TWO HOURS.

1. What do you understand by the terms *Tolerance* and *Immunity*? What explanations have been offered for tolerance to *Arsenic* and to *Morphine*?

2. Give an account of the physiological action resulting from taking a large cupful of tea, made by infusion of two teaspoonfuls of Indian tea. What objectionable effects may arise from tea drinking?

3. State how you would treat a case of Acute Rheumatism with *Sodium Salicylate*, mentioning the dose, frequency, and duration of administration, and any possible unpleasant effects, and how to avoid them. Mention how soon you would expect the various symptoms to disappear under your treatment.

4. Mention four *Counter-irritants*, and state exactly how, and for what morbid conditions, you would use each. Explain their therapeutical effects from their pharmacological action.

### III.—THIRD PROFESSIONAL EXAMINATION.

#### PATHOLOGY—Two Hours.

*(Only FOUR questions to be answered.)*

1. What is dropsy? Mention the conditions of its occurrence and discuss from both the clinical and experimental standpoints, the factors concerned in its production.
  2. Give an account of the changes in the blood and organs in lymphatic leucocythaemia. Discuss the relations of this disease to other allied conditions.
  3. Describe the naked-eye and microscopic changes in the lungs in acute broncho-pneumonia. What complications may be associated with or follow this disease, and how may death result?
  4. Give a careful description of the typhoid bacillus. How would you isolate it in a case of typhoid fever?
  5. What is "active immunity"? Give a detailed account of any one form.
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#### MEDICAL JURISPRUDENCE—Two Hours.

*(FOUR questions only to be answered, of which No. 5 must be one.)*

1. In the living subject, what are the signs of (a) recent delivery and (b) remote delivery?
2. In determining the probable age of a child by post-mortem examination, what conditions of ossification and what other appearances would lead you to report that death had taken place about (a) the third year of life; (b) the fifth year; (c) the eighth year; (d) the tenth year; and (e) the thirteenth year?
3. A dead body is found suspended from a wall peg by a cord around the neck. State the facts which might lead you to conclude (a) that the body was suspended after death; (b) that death was due to suspension; (c) that the suspension was suicidal; (d) that it was homicidal; and (e) that it was accidental.
4. State exactly how you would proceed in taking the dying declaration of a wounded man.
5. A group of vegetable poisons have the common feature of causing dilatation of the pupil. What are the principal members of the group? To what natural order do they belong? What are the symptoms of poisoning by the commonest of them? What is its alkaloid, and how is it separated out?

## PUBLIC HEALTH—TWO HOURS.

(FOUR questions only to be answered.)

1. The mortality from phthisis has steadily declined in this country for the past thirty years. What have been the main causes of the decline? How can further decline be brought about?

2. What is the difference between a sewer and a drain? What is the best shape of a large sewer, and why? How are sewers ordinarily ventilated? What nuisances may result from such ventilation? How may such nuisance be prevented or obviated?

3. Describe in exact detail how you would disinfect a room from which a case of scarlet fever has been removed to hospital, (a) by sulphur fumigation, (b) by formaldehyde.

4. What are (a) the physical principles, and (b) the purposes of natural ventilation of a living room?

5. What is meant by the term infantile mortality? What are its main causes? On what lines is it likely to be diminished?

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IV.—FINAL PROFESSIONAL EXAMINATION.

## SURGERY—TWO HOURS.

(FOUR questions to be answered, including Nos. 1 and 2.)

1. Describe the process of ulceration.

2. Give the pathology, diagnosis, and treatment of acute osteomyelitis.

3. Give the causes and common sites of rupture of the male urethra, and describe the complications and treatment.

4. Give the aetiology, pathology and treatment of the various forms of talipes.

5. State in detail how you would prepare a patient for operation for the removal of a fatty tumour of the back, and describe the operation with special reference to the points you would attend to in order to secure aseptic wound healing.

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PRACTICE OF MEDICINE—TWO HOURS AND A HALF.

1. What physical signs do you look for when there is a typical cavity in the lung? and state *all* the circumstances which would lead you to conclude that it is due to tubercular disease.

2. How can a late (tertiary) scaly cutaneous manifestation of syphilis be distinguished from ordinary psoriasis, and how would you treat it locally and constitutionally?

3. What are the most usual causes, and what are the symptoms and physical signs which characterise

- (a) Mitral obstruction ;
- (b) Tricuspid regurgitation ;
- (c) Aortic regurgitation ?

4. Give a sketch of the complications of diabetes mellitus.

## OBSTETRICS AND GYNECOLOGY—TWO HOURS.

1. State the diagnosis and treatment of a case of abortion at the end of the third month, when it is

- (a) threatened,
- (b) inevitable,
- (c) incomplete.

2. Give the management of a breech presentation and state how you would deal with the difficulties that may arise.

3. Describe a case of puerperal eclampsia and state the treatment you would adopt for a patient at the end of the eighth month of pregnancy.

4. What are the pathological conditions described as endometritis ? Give their diagnosis and treatment.

5. Give the symptoms, differential diagnosis, and treatment of retroflexion of the non-gravid uterus.

## VI.—FOR DEGREES IN LAW.

### I. PRELIMINARY EXAMINATION FOR B.L.

#### a.—ARTS AND SCIENCE PRELIMINARY.

(See pp. 525-550.)

#### b.—ARTS SUBJECTS.

(Same as Degree of M.A. See pp. 551-586.)

### II. LAW EXAMINATIONS FOR LL.B. AND B.L.

#### CIVIL LAW—THREE HOURS.

(N.B.—Candidates are requested to answer only TEN of the following twelve questions.)

1. Describe the functions of the Senate during the period of the Republic.

What alterations were made in the position and powers of the Senate on the change from the Republic to the Empire ?

2. State the purport of the following enactments: *Lex Valeria de Provocatione*; *Leges Juliae et Plautiae Papiriae*; *S.C. Tertullianum*.

3. Give an account of the circumstances which led to the enactment of the XII. Tables.

Discuss the characteristic features of the system of law in the XII. Tables.

Trace the steps by which the publication of the law, begun by the XII. Tables, was finally completed.

4. Explain the meanings of the term *jus publicum*.

What conditions were essential to the existence of (1) a natural *persona*, and (2) a juristic *persona*? Discuss the statements: *Unus homo plures personas sustinere potest*.

5. Describe historically the effects of the *patria potestas* as regards (a) the person and (b) the property of a son *in potestate*.

Comment on the statement: *Quod ad jus publicum attinet non sequitur jus potestatis*.

6. Distinguish between the tutorial functions of *interpositio auctoritatis* and *gestio* in the case of a pupil.

What restrictions were put on the power of a tutor, in virtue of his right of *gestio*, to alienate the property of the pupil?

Examine the statement: *Namque placuit meliorem quidem suam conditionem licere pupillis facere etiam sine tutoris auctoritate, deteriorem vero non aliter quam tutore auctore*. *Inst. I. 21. pr.*

7. What constitutes *possessio*?

What conditions were requisite to the acquisition of property by *traditio*?

8. What was necessary to the valid execution of a *testamentum tripertitum*?

What remedies were available to a legatee, in Justinian's time, for enforcing his right to a legacy?

By whom, and in what circumstances, could the *actio de inofficioso testamento* be brought?

9. Distinguish *legatum*, *fideicommissum* and *donatio mortis causa*.

State the law regarding the *beneficium inventarii*.

Translate and explain the statement: *Nam moribus institutum est ut, quum ejus aetatis filii sint, in qua ipsi sibi testamentum facere non possunt, parentes eis faciant*. *Inst. II. 6. pr.*

10. Write a brief note on the development of the contract *verbis*. State the purpose and effect of a *stipulatio Aquiliana*.

11. Give an account of the contract *mutuum*.

Explain the effect of the *S.C. Macedonianum*.

In what ways might a right of *hypotheca* be constituted?

12. Translate and comment on the following texts:

(a) Si pecuniae ususfructus legatus est, ita datur legatario, ut ejus fiat, et legatarius satisfaciat heredi de tanta pecunia restituenda, si morietur aut capite minuetur. *Inst. II. 4. 2.*

(b) Inviti adolescentes curatores non accipiunt praeterquam in litem; curator enim et ad certam causam dari potest. *Inst. I. 23. 2.*

(c) Omnes servitutes praediorum perpetuas causas habere debent.

(d) Emptio venditio nuda consentientium voluntate contrahitur; permutatio autem ex re tradita initium obligationi praebet.

*Candidates for DEGREES IN LAW are recommended to answer, in addition, Two of the following questions:*

1. What remedies were available to an *emptor* on discovering a latent defect in the *merx*, after the sale?

2. State the law relating to the cancellation of sale on the ground of *laesio enormis*.

3. State the purport and legal effect of the following *pacta*, when annexed to a contract of sale: (a) *Pactum displicentiae*; (b) *In diem addictio*; (c) *Lex Commissoria*.

4. Translate and comment on the following texts:

Si sciens emam ab eo cui bonis interdictum sit vel cui tempus ad deliberandum de hereditate ita datum sit, ut ei deminuendi potestas non sit, dominus non ero: dissimiliter atque si a debitore sciens creditorem fraudari emero. *D. 18. 1. 26.*

Res in aversione empta, si non dolo venditoris factum sit, ad periculum emptoris pertinebit, etiamsi res adsignata non sit. *D. 18. 1. 62. 2.*

## LAW OF SCOTLAND—THREE HOURS.

(No more than TEN questions to be attempted.)

1. Explain the nature and effect of (1) *rei interventus*: (2) *locus penitentiae*.

2. Explain the effect in bankruptcy (1) of the Act 1621, cap. 18, and (2) of the Act 1696, cap. 5.

3. Give the rules as to tacit relocation in the law of lease.

4. To what cautionary obligations does the septennial limitation apply?

5. Explain the phrases *jus in re*, *jus ad rem*. Illustrate your answer from the law of securities over moveables.

6. Sketch the law as to copyright in lectures.

7. Explain the existing law of bail.

8. In what cases may a minor be refused restitution? To what extent, if at all, does the privilege of restitution transmit to a minor's representatives?

9. In what cases may land or a heritable interest in land be treated as moveable?

10. What are the statutory rules regulating settlement of accounts between partners after a dissolution of partnership?
11. State generally the law regarding donations.
12. What tacit hypothecs are recognised by Scots law?
13. In what cases has a seller a lien over the goods sold? How is his lien affected by the transfer of a document of title?

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### CONVEYANCING—THREE HOURS.

(Not more than TWELVE questions to be attempted.)

1. Sketch briefly the chief features of the Feudal System of Land Tenure as first established in Scotland, and mention any particulars in which that system has been obscured by subsequent legislation.
2. Explain and illustrate with reference to the Law of Conveyancing the phrases (1) *jus tertii*, (2) *jus quaesitum tertio*.
3. Enumerate and discuss the principles on which it has been maintained that a subvassal is personally liable for the over-feuduty. State precisely the extent to which such subvassal is affected by his immediate superior's failure to pay the over-feuduty.
4. What is meant by a 'split'? How and for what purpose was it intentionally effected, and how might it arise *per incuriam*?
5. Is it true to say that warrandice in a disposition is 'personal and cometh not within the infeftment'? How does the question affect the disponee's Singular Successors?
6. Discuss the circumstances in which an obligation or right of relief connected with lands requires to be specially assigned to a Purchaser. What statutory provision has been made therefor?
7. Sketch briefly the changes introduced in the last century in the law relating to the completion of title to land by a General Disponee under a *Mortis Causa* Settlement.
8. Give a short account of the developments in the law relating to Special Services.
9. 'The obligation of a Creditor in a Bond and Disposition in Security to restore the security subjects upon the sum borrowed and interest being repaid is one and indivisible, and it is the counterpart of the Debtor's obligation to repay which is also indivisible.'  
Explain and illustrate.
10. What was the meaning and effect of lands being in 'non-entry'? State precisely how the Act of 1874 dealt with the matter.
11. What is the purpose of an Allocation of Feuduty, and how is it effected at the present day?
12. Distinguish 'Registration of Title' from 'Registration of Deed.' Which system prevails in Scotland, and mention briefly any of its advantages or disadvantages?

13. How does a right of exclusive ownership differ from (1) a right of servitude, (2) a right of common property, (3) a right of commony, and (4) a right of common interest?

14. Discuss whether under any circumstances the possessor of a power of apportionment over certain funds under a Will can validly restrict to a liferent the interest of one of several appointees of the funds in question.

15. How is a prescriptive title to land acquired? Show precisely how a purchaser's requirements in regard to Searches have been affected by the Act of 1874.

## PUBLIC INTERNATIONAL LAW—THREE HOURS.

(Omit FOUR questions.)

(Reference to principle or authority is expected.)

1. Describe the position in International Law of any one of the neutralised states. Consider the effect of an extension of its territory by a neutralised state.

2. Consider the contention that apart from Convention a right of navigation exists on rivers which traverse or bound the territories of more than one state.

3. Consider the following cases:

(a) *A*, a Chinese subject, is arrested in London by servants of the Chinese Ambassador, and detained in the Chinese legation. It is alleged that he has committed a crime in China.

(b) *B*, a British subject, secretary to the Persian legation in London, refuses to pay the taxes assessed on his house.

4. Explain the rules of International Law as regards the right of a state to exercise jurisdiction over gulfs and bays on its coasts.

5. War breaks out between Great Britain and a great commercial and maritime power. Advise our Government as to their legal rights in regard to property of the enemy found afloat in our ports at the commencement of hostilities.

6. Summarise the rules adopted by the Hague Conference, 1899, applying the principles of the Geneva Convention to maritime hostilities.

7. States *A* and *B* are at war. Is *A* entitled

(a) To cut down and sell timber in forests belonging to *B*?

(b) To appropriate works of art belonging to *B*?

(c) To collect debts due from its own subjects to subjects of *B*?

8. What do you know of the "Twenty-four hours' rule"? Do you consider it a rule of public international law? Mention any international agreement in which it has been adopted.

9. What is the position of neutral mail steamers in time of war?

10. Give an account of the case of the *Santissima Trinidad*.



11. Discuss the legitimacy of demanding contributions from an undefended coast town under threat of bombardment.

12. Explain the difference between Absolute and Conditional Contract with reference to the nature and destination of the articles included in each class and the penalty for carriage.

## INTERNATIONAL PRIVATE LAW—THREE HOURS.

(Omit FOUR questions.)

(Reference to principle or authority is expected.)

1. Explain with reference to the doctrine of *Renvoi* the ambiguity underlying the phrase "the law of Scotland."

2. State the chief rules as to acquisition of domicile (a) at birth; (b) at a period later than birth. Under (b) consider, under reference to authority, cases of double residence.

3. Explain the Statute Theory. What difficulties was it intended to solve?

4. A, an Austrian subject who has come to Glasgow in order to escape military service, becomes a naturalised British subject and marries a Scotchwoman. B is A's son born in Spain, where A has settled for business purposes. Is B a natural born British subject? What is A's own nationality if he returns to Austria?

5. What are the rules of International Private Law administered in England with regard to legitimation *per subsequens matrimonium*? Mention any points on which they differ from those administered in Scotland.

6. . . . by the law of England . . . the capacity to marry . . . is governed by the law of the place where the marriage is performed (Meili). Is this a correct statement of the law?

7. What is the effect of a change of domicile on the property relations of married persons *inter se* (a) where there is an express contract, (b) where there is no express contract? *Quid juris* if there is a statutory matrimonial regime in the country to whose law the parties are subject at the date of marriage?

8. What are the provisions of the Wills Act, 1861? How far are they applicable to persons naturalised in this country? How did they alter the common law of Scotland?

9. What is the proper law of the Contract? Are parties at liberty to contract themselves in or out of a system of law at their pleasure?

10. Summarise the provisions of the Bills of Exchange Act with reference to conflicts of laws.

11. (a) An Englishman is sued in Scotland for a tradesman's account incurred in England. He pleads the triennial prescription, which is shorter than the English limitation (six years).

(b) An Englishman is sued in Scotland on a contract entered into in

England to which the Scots triennial prescription applies. He pleads that by the English Statute of limitations the debt is barred. Discuss the validity of either defence.

12. On what principle are foreign judgments enforced in this country? Apply your answer to determine the cases in which a foreign judgment may be examined by the Court in which it is sought to be enforced.

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## JURISPRUDENCE—THREE HOURS.

(TEN questions and no more to be answered.)

1. "The greater or less happiness of a progressive people depends on the degree of promptitude with which the gulf between law and social necessities and social opinion is narrowed." Explain this passage and the different modes in which, according to Maine, law is altered to produce the required approximation.

2. *Omnes homines natura aequales sunt*. What significance had this maxim (a) to the Roman juriconsults, (b) to the French political thinkers of the eighteenth century?

3. What is Maine's fundamental criticism upon those writers who explain the origin of civil society by a social contract between people living in a state of nature? Illustrate his position from his remarks on the origin of testamentary succession and its relation to intestate succession.

4. What, according to Maine, are the fundamental differences between the structure of primitive society and feudal society? How does he explain the origin of the latter?

5. What is Maine's theory of the origin of true criminal law? Explain shortly how criminal law developed in Rome.

6. Explain and examine Holland's view of the relation of custom to law.

7. What view do Austin and Holland take of international law and on what grounds? Examine their view.

8. Explain the origin of the doctrine of the liability of an employer for the acts of his employee. How far and on what grounds may it still be justified?

9. "The object of a developed system of law is the conservation whether by means of the tribunals or of permitted self-help of the rights which it recognises as existing." Explain and examine Holland's view in this passage. Notice the relative importance of self-help in primitive and developed law.

10. What does Holland mean by "law affecting the state as a quasi private juristic personality"? State and examine his view as to its classification as private or public law.

*For students of Sessions prior to 1905-6 only.*

11. Explain and contrast the meanings of the word law in the following: 'law of gravitation,' 'law of supply and demand,' 'law of Scotland.'

12. In what sense (if any) has the individual rights against the State?

13. Every legal duty implies a legal right. Explain and examine this. Refer specially to the legal obligation to refrain from cruelty to animals.

*For students of 1905-6 and 1906-7 only.*

14. What is Kant's view of the relation of compulsion to legal right and how does he reconcile it with his conception of the relation of right to freedom?

15. Explain Kant's distinction of rights into 'innate right' and 'acquired right.'

16. What does Kant mean by ideal acquisition of external objects? Give and shortly explain the principal kinds of ideal acquisition.

## CONSTITUTIONAL LAW AND HISTORY—

THREE HOURS.

*(Omit two questions in each part.)*

### PART I.

1. What do you understand by feudalism? What elements of feudalism were found in England on the eve of the Norman Conquest?

2. Describe the administration of justice in rural England at the close of the reign of Henry III.

3. What were the main provisions of (a) the Constitutions of Clarendon, (b) the Statute of Quia Emptores?

4. Estimate the constitutional results of the Reformation in England.

5. "Charles II. was restored unconditionally to the prerogatives enjoyed by his ancestors." Explain, criticise, illustrate.

6. Discuss the circumstances attendant on the passing of the Act of Union between England and Scotland, and give a short account of its chief provisions.

7. How far did the House of Commons represent public opinion in the eighteenth century? What causes hampered its efficiency as a representative body?

### PART II.

8. Trace the growth of the principle that legislation, which has for its object the grant of public money or the imposition of burdens on the taxpayer, is under the entire control of the House of Commons.

9. Sketch the history and give some account of the trial of Parliamentary election petitions.

10. Explain clearly the distinction between the 'Cabinet' and the 'Privy Council.' How far is the acceptance of any office of profit under the Crown a bar to a seat in the House of Commons?

11. What constitutional questions were involved in (a) The case of Sir Thomas Shirley, (b) Calvin's case, (c) *Godden v. Hales*?

12. What is meant by the expression 'the right of the subject to personal freedom'?

War having been declared by this country, *A* is impressed for the naval service, and *B*, a Volunteer, is ordered to serve abroad. Advise *A* and *B* as to their legal position.

13. Give the statutory provisions regulating the tenure of the Crown in this country.

14. What means of redress, civil or criminal, has an aggrieved individual against (a) the Sovereign, (b) the Lord-Lieutenant of Ireland, (c) the Irish Secretary, (d) a soldier acting under his officer's orders?

## MERCANTILE LAW—THREE HOURS.

*(Not more than TEN of the following questions to be attempted.)*

1. *A* offers to sell *B* 100 tons iron plates at 65s. per ton—delivery to be given within three months from date of acceptance. *B* writes accepting the offer, but states delivery is to be given in one month. *A* does not repudiate the terms of *B*'s acceptance, but when called on to deliver the plates at the end of the month he refuses to do so. What are the rights of parties?

2. Where a bill is sent to a banker to be discounted, and the banker refuses to do so, can he retain the bill in security of a general balance due to him by his customer? Give reasons for your answer.

3. In what way do the Factors Acts modify the Common Law in regard to Factors or Mercantile Agents pledging their principals' goods for advances?

4. A cheque sent by post in payment of an account is stolen before delivery, and the payee's name is forged by the thief, and payment of the cheque made to him. Who bears the loss—the drawer, the payee, or the Bank who paid the cheque?

5. Explain the sexennial limitation of Bills.

6. Explain the meaning and effect of the Bills of Exchange (Crossed Cheques) Act, 1906, and state shortly the circumstances which led to the passing of the Act.

7. What is notour bankruptcy? How may notour bankruptcy be constituted under the Debtors Act, 1880?

8. What debts are preferred in a sequestration?
9. How many persons may form an incorporated Company with or without limited liability under the Companies Act of 1862, and what Companies are prohibited unless registered under that Act? When and under what conditions may an Association be registered under the Companies Acts without the word "limited" forming part of the name?
10. When and under what circumstance is the right to recover freight lost to the shipowner?
11. What particulars are required by the Marine Insurance Act, 1906, to be specified in a Marine policy? What is the difference between a voyage policy and a time policy? Give examples. What is meant by a valued policy and an unvalued policy, and what sum is recoverable under each of these policies respectively?
12. Where a shipowner is compelled by law to employ a pilot during a certain portion of his voyage, and injury to goods is occasioned by the fault or incapacity of the pilot, is the liability of the shipowner as a common carrier in any way affected or modified (1) when the damage occurs when the vessel is in motion in charge of the pilot, and (2) when she is anchored at the entrance to a dock to which she is making with a view to discharge cargo, the pilot being still on board?

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## FORENSIC MEDICINE—TWO HOURS.

*(Four questions only to be answered.)*

1. What is a wound in law? State (1) the divisions into which wounds have been classified, and (2) the classes of weapons by which they are produced. Define a "slight" and a "dangerous" wound.
2. What is meant by death by asphyxia? What are the main post-mortem appearances found (*a*) externally and (*b*) internally? Name some of the forms of death associated with criminal charges in which asphyxia is the proximate cause.
3. Give in some detail two of the most conclusive tests for blood. How may mammalian blood be distinguished from the blood of other classes of animals?
4. What facts and what appearances on a dead body would point to death by lightning stroke? What is the proximate cause of death in such cases?
5. What circumstances would warrant a plea of insanity (*a*) in bar of trial and (*b*) in bar of sentence in a case in which a person was charged with murder?

## VII.—FOR DEGREE OF B.D.

## I.—FIRST DEPARTMENT.

## HEBREW.

## FIRST PAPER—THREE HOURS.

1. Point and translate the following :

ויגד אחאב לאיזבל את כל־אשר עשה אליהו ואת  
 כל־אשר חרג את־כל־הנביאים בחרב: ותשלח איזבל  
 מלאך אל־אליהו לאמר בה יעשון אלהים ובה יוספן  
 כי־נעת מחר אשים את־נפשך כנפש אחד מהם:  
 וירא ויקם וילך אל־נפשו ויבא באר שבע אשר ליחודה  
 וינח את־נערו שם: והוא הלך במדבר דרך יום ויבא  
 וישב תחת רתם אחד וישאל את־נפשו למות ויאמר  
 רב עתה יהוה קח נפשי כי לא־טוב אנכי מאבתי:  
 וישכב וישן תחת רתם אחד והנה־זה מלאך נגע בו  
 ויאמר לו קום אכול: ויבט והנה מראשתיו עגת רצפים  
 וצפחת מים ויאכל וישת וישכב: וישב מלאך  
 יהוה שנית ויגע־בו ויאמר קום אכל כי רב מנך הדרך:  
 ויקם ויאכל וישתה וילך בבית האבילה ההיא ארבעים  
 יום וארבעים לילה עד הר האלהים חרב:  
 יברכך יהוה וישמרך: יאר יהוה פניו אליך ויהנך:  
 ישא יהוה פניו אליך וישם לך שלום:

2. Write the following in punctuated Biblical Hebrew :

Abraham was on his way with Isaac to Moriah when the Satan presented himself in the guise of an exceedingly meek old man. "Foolish man," said the Satan to Abraham; "canst thou really believe that God has commanded so wicked a sacrifice as thou art about to offer?" Abraham knew from these words that the man must be the Satan, desirous of turning him from obedience to God; so he rebuked the old man, who

departed from him. Then the Satan returned disguised as a shining youth. Addressing Isaac he said: "Knowest thou not that thy foolish old father is leading thee to death? My son, follow him not, for he is old and witless." Isaac repeated these words to Abraham, who explained the true character of their interlocutor. The Satan again left them, but hurried on in advance, and transformed himself into a stream of water, broad and deep, stretching across their road. The patriarch and his son plunged straight in, and the water covered them to the neck. Then Abraham recognised the place and knew that there was no natural river there at all. "It is the Satan," cried Abraham. "Beshrew thee, thou Satan, and get thee gone." And the Satan fled finally discomfited. ISRAEL ABRAHAMS: *Festiva! Studies*.

## SECOND PAPER—THREE HOURS.

### I. Isaiah LXIII. 19b—LXIV. 11.

#### 1. Translate.

2. Parse **וַיִּשַׁע** in v. 2; **וַיִּשַׁע** and **וַיִּשַׁע** in v. 4; **וַיִּשַׁע** and **וַיִּשַׁע** in v. 5; **וַיִּשַׁע** in v. 6; and **וַיִּשַׁע** in v. 11.

3. What is the syntax of **אֲנִי** in v. 3; of **בָּרַךְ** and **בָּרַךְ** in v. 4; of **אֲשֶׁר** in v. 10; and of **הִיא** in v. 10b?

4. Write syntactical notes on **קָרַעַת** in v. 19; **וַיִּגַּע** in v. 1; **נָקָה** in v. 2; **פָּגַעַת** and **וַיִּגַּעַת** in v. 4.

5. What is the difficulty in translating **וַיִּשַׁע** in v. 4? Give a critical account of the various renderings that have been given.

6. The Septuagint renders **וַיִּשַׁע** in v. 4 by *ἐπ'λαγῆθημεν* and **וַיִּגַּעַת** in v. 6 by *καὶ παρέδωκας ἡμᾶς*. What was their Hebrew text?

### II. Psalm XLII.

#### 1. Translate.

2. Parse **אֲדָמָה** in v. 5; **הִיגָה** in v. 5; **תַּשְׁתַּחֲוֶהֱ** in v. 6; **תַּחֲמִי** in v. 12; and **הִיחַלִּי** in v. 12.

3. What is the syntax of **וַיִּגַּעַת** in v. 2; of **אֲנִי** in v. 5; of **הִיגָה** in v. 5; **וַיִּגַּעַת** in v. 7; and **סָכַנִי** in v. 10?

4. Give syntactical notes on **אֲנִי** and **וַיִּגַּעַת** in v. 5; **אֲנִי** and **וַיִּגַּעַת** in v. 5; **וַיִּגַּעַת** in v. 6; and **וַיִּגַּעַת** in v. 9.

5. What is the difficulty caused by the Masoretic punctuation of **אָדָם**, and how might it be removed?

6. How do you account for **יִשְׂרָאֵל פִּנּוּ** in v. 6, as compared with **יִשְׂרָאֵל פִּנּוּ וְאֶלֶּהִי** in v. 12?

7. Give explanatory notes on **לְמַנְצָה** and **מִשְׁכֵּל** in v. 1. What is the meaning of the **ל** in **לְבִי קָרָה** in v. 1?

III. 1. What are the peculiarities which distinguish Isaiah **LV. — LXVI.** from **XL. — LV.**, and which have led many to deny the unity of the second Isaiah?

2. How are these peculiarities explained by those who maintain that **XL. — LXVI.** are the work of one author?

### NEW TESTAMENT EXEGESIS —THREE HOURS.

1. What information does the New Testament give regarding the writer of the Gospel according to Luke? Does this information throw any light on the peculiarities of the Gospel?

2. What opinions have been held as to the relation between Marcion's Gospel and the Gospel according to Luke?

3. Compare Luke **viii. 4—18** with the similar passages in Matthew and comment on any points in matter and form which are characteristic of Luke.

4. Answer the same question in regard to Luke **ix. 28—36**.

5. Translate, with exegetical notes, Luke **x. 17—20**.

6. Comment on each clause of James **iii. 3—6**, with critical and exegetical notes, and remarks on the language and style of the passage.

7. Translate James **v. 1—6**. Write notes on the grammar and rhetoric of this passage, noticing especially the tenses and the connection between the successive clauses.

8. Show the bearing of James **v. 13—16** upon ecclesiastical usage.

### APOLOGETICS—THREE HOURS.

1. Discuss the universality of religion. Indicate the main causes of variations in religion.

2. State briefly the theory of knowledge propounded by Plato, Kant, Hegel, and Lotze; and indicate their bearing on the idea of religion.

3. Mention the chief Aryan religions, and give the characteristic features of each. Wherein do they differ from the Semitic type?



4. Discuss the claim of Christianity to be the universal religion, and compare it with Buddhism and Islam.

5. Illustrate the parts played by Hebraism and Hellenism respectively in the preparation for Christianity.

6. State the ontological argument for the existence of God, and estimate its validity.

7. Mention the chief attempts which have been made to explain the Resurrection of our Lord. State clearly and criticise the view of Martineau.

8. Summarise Principal Caird's criticism of Herbert Spencer's theory of Agnosticism.

9. What is Materialism? Mention its chief defenders in this country. Show that Secularism involves Materialism.

10. State and criticise the pessimistic view of life and its chief end. Compare the teaching of Buddha with that of Schopenhauer.

## II.—SECOND DEPARTMENT.

### DIVINITY—THREE HOURS.

1. What is Revelation? Discuss briefly (*a*) the antecedent probability of a Revelation, and (*b*) the relation of reason to Revelation.

2. Wherein lies the authority of Holy Scripture? Consider the question of inerrancy in its relation to authority.

3. Indicate the right method of arriving at a true doctrine of Inspiration, and discuss its relation to criticism.

4. Give a critical account of the main theories of Inspiration.

5. State the chief arguments for (*a*) the unity, and (*b*) the personality of God. Elucidate this proposition: "Every theist is, by a rational necessity, a monotheist."

6. Indicate the relation between the immanence and the transcendence of God, and show that the Christian doctrine has room for both.

7. Outline the Biblical evidence for the doctrine of the Trinity, and give an account of the following systems: Sabellianism, Arianism, Socinianism, modern Unitarianism.

8. Summarise St. Paul's teaching regarding (*a*) the universality of sin, and (*b*) the bearing of Adam's sin upon his posterity.

9. State St. Paul's view of the Law, and explain the following phrases:

(*a*) *Χωρὶς νόμον ἁμαρτία νεκρά*: (*b*) *διὰ νόμον ἐπίγνωσις ἁμαρτίας*: (*c*) *ὁ νόμος παιδεία γὰρ ἡμῶν γέγονεν εἰς Χριστόν*.

10. Give a brief account of his argument for the doctrine of Justification by faith.

## CHURCH HISTORY—THREE HOURS.

ENGLAND, SCOTLAND, AND IRELAND (1702—1760).

1. Describe the Occasional Conformity and Schism Acts in England. When were they repealed?
2. Give an account of (a) the case of Dr. Henry Sacheverell, (b) the Bangorian Controversy, and (c) the Trinitarian Controversy.
3. (a) Name the leading Deistical and Anti-Deistical writers. What were the positions involved? (b) Trace briefly the rise of Methodism.
4. State what you know of any *two* in each of the following groups: (a) Archbishop Wake, Bishop Atterbury, Bishop Butler, Dr. Samuel Clarke, Dr. Isaac Watts; (b) Principal Carstares, Thomas Boston, Thomas Gillespie, Forbes of Culloden, Lord Pitsligo, Bishop Sage; (c) Archbishop King, Archbishop Boulter, Dean Swift, Dr. John Leland, Bishop Berkeley.
5. Indicate the attitude of the Church of Scotland towards the Union of 1707, and trace its effects on the subsequent history of the Church.
6. Give an account of (a) the case of Professor Simson, (b) the Marrow Controversy, and (c) the Secession of 1733.
7. Describe the Toleration (Scotland) Act of 1712. What were the Usages?
8. Trace the history of Patronage in Scotland from its restoration in 1712 to the close of this period.
9. Describe the Irish Penal Laws enacted in Queen Anne's reign, in their bearing on (a) the Roman Catholics, and (b) the Protestant Dissenters.
10. Trace the history of Presbyterianism in Ireland from 1702 till 1760. Give an account of the Subscription Controversy.
11. State the main provisions of the Act of Toleration of 1719, and indicate the general tenor of the Roman Catholic Declaration of 1759.

## TEXTUAL CRITICISM—THREE HOURS.

1. What are the three great sources of documentary evidence for the text of the New Testament? Explain the limitations of each as witnesses for the original text.
2. "The more ancient reading is generally the reading of the more ancient MSS." What proof can be adduced for this canon?
3. Illustrate the value of geographical considerations in estimating the evidence for the text.
4. What is the distinction between Intrinsic Probability and Transcriptional Probability? What are the chief canons for the elimination of transcriptional error? State the limits within which they are applicable.
5. Distinguish between the "Syrian Recension" and the "Syriac Version." What do you know of the history of each?

6. Mark i. 12<sup>6-2</sup> Καὶ εὐθὺς τὸ πνεῦμα αὐτὸν ἐκβάλλει εἰς τὴν ἔρημον.  
 12. εὐθὺς cum **SBEPHLM**SUVΓΔII<sup>mg</sup> al pl . . . Ln εὐθὺς cum  
 ADE\*KM<sup>mg</sup>Π\* al plus<sup>50</sup> | το πνεῦμα: D add το ἅγιον | αὐτὸν  
 ἐκβάλλει cum **SABL** unc<sup>10</sup> arm go . . . DΔ 33. 69. 124.  
 (ante το πν.) 346. al pauc (it vg al) ἐκβ. αὐτ.

Explain as fully as you can the conventions and abbreviations employed by Tischendorf in this extract, naming and describing some of the chief MSS.

### HERMENEUTICS--THREE HOURS.

1. What different meanings are attached to the term Text? Distinguish its uses in questions of Textual Criticism from its use in questions of Interpretation.
2. Is Textual Criticism a part of Hermeneutics? Justify your answer.
3. What is the problem of Heuristics? What means are available for the solution of the problem?
4. State the chief points of distinction between Classic Greek and New Testament Greek in respect of (a) accident and (b) syntax. What effect did the introduction of Christianity produce on the vocabulary of the time? Give illustrations.
5. Give examples illustrating the special *usus loquendi* of (a) Paul, (b) the author of the Fourth Gospel, and (c) the author of the Epistle to the Hebrews. Add remarks on the style of each.
6. What are the cautions to be observed in the use of parallel passages?
7. Illustrate the errors in interpretation arising (a) from neglecting the context, (b) from mistaking juxtaposition for context, and (c) from disregarding the emotional element in a passage.

### XIV.—VACATION EXERCISES, Etc.,

FOR 1907-8.

#### GREEK CLASSES.

Open to any Member of the Greek Class, Sessions 1906-7 and 1907-8.

1. For Attic Prose—Berkeley, *Three Dialogues between Hylas and Philonous*, Dial. i. from the beginning to "entirely relates to reason."
2. To learn by heart Euripides, *Troades*, 1123-1225.
3. To learn by heart Plato, *Phaedo*, xii., xiii., οὐκοῦν, ἔφη . . . εὖ ἂν ἔχοι.

The same student may enter for all the above competitions. Several prizes may be given for each competition. Junior students will be judged on a more lenient standard.

The prose to be sent in by 22nd October, 1907.

## HUMANITY CLASS.

Prizes will be given for Vacation Exercises as follows :

Open to all members of the Senior or Honours Class of 1906-1907 :—  
I. To learn by heart Lucan, VII. 647-872.

II. To put into Latin Prose, Goldsmith's *Citizen of the World*, Letter C.

III. To put into Latin Elegiacs Dryden, *The Flower and the Leaf*, 33-145.

The examination in I. will be held early in November, 1907. The versions must be sent in to the Professor on or before 1st November. Each exercise must bear a motto, and be accompanied by an envelope bearing the same motto, with the writer's name inside, together with a statement that the exercise is his own unaided work.

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CLASS OF BOTANY.

A prize is offered to matriculated students who have passed through the Class of Botany in the University or Queen Margaret College, for the best and approved Herbarium of Scottish Phanerogamous and Vascular Cryptogamous Plants, to be named after Hooker's *Students' Flora of the British Islands*. The specimens must have been collected upon the mainland of Scotland, or upon the Scottish Islands, between 20th April, 1906, and 6th October, 1907, and must have affixed, in addition to the name, the date and locality of collection.

The Herbaria must be sent, addressed to the Professor of Botany, to the University of Glasgow, on or before 6th October, 1907, and with each a sealed note bearing a motto outside, and containing the name of the competitor, with a declaration that the plants in the collection have all been gathered by himself in Scotland, and within the period above stated, and that they have been named by him without assistance, save that derived from books on Herbaria.

The collections must be accompanied by a numbered and arranged list of the plants contained in them.

Students of the first year in Botany are informed that a similar prize will be offered in October, 1908, and are advised to begin collecting for that competition in April, 1907.

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MORAL PHILOSOPHY.

A sum of five guineas, given by Mrs. John Caird, will be awarded in prizes to the students who, entering the Honours Class for the first time in session 1907-8, gain the highest marks in an examination on

(a) The general history of Ethics in Britain from Hobbes to Spencer (both included).

(b) The Ethics of Aristotle.

(c) The Ethical theory of Kant.

(d) Bosanquet's Theory of the State.

# XV.—FINANCIAL STATEMENT OF THE UNIVERSITY FOR 1905-1906.

## INCOME.

<b>I. Parliamentary Grant—</b>			
(a) Under Universities Act, 1889, . . . . .	£12,180	0	0
(b) Under Education and Local Taxation Act, 1892, . . . . .	8,700	0	0
<b>II. Class Fees—</b>		£20,880	0 0
(a) Constituting the Fee Fund, . . . . .	£23,418	13	6
(b) Other Classes, . . . . .	1,732	6	11
<b>III. Other Fees—</b>		25,151	0 5
(a) Matriculation, . . . . .	£2,389	12	0
(b) Examination and Graduation, . . . . .	5,750	8	6
(c) Registration, . . . . .	315	0	0
(d) Recognition towards expenses of in- spection, . . . . .	5	5	0
<b>IV. Special Endowments—</b>		8,460	5 6
(a) Chairs, . . . . .	£2,498	12	2
(b) Lectureships, . . . . .	981	18	2
(c) Demonstratorships, etc., . . . . .	474	7	8
		3,954	18 0
<b>V. Teinds (less Ministers' Stipends, £1,639 5s. 10d.), Feu- duties, Ground Annuals, Dividends, Interest, and Rents, . . . . .</b>		11,773	19 8 $\frac{3}{4}$
<b>VI. Library—</b>			
(a) Carnegie Trust, . . . . .	£1,000	0	0
(b) Subscriptions, . . . . .	74	0	6
(c) Revenue of Legacy Funds (including £10 from Euing Fund), . . . . .	58	0	0
(d) Annual Grant from M'Callum Fund for Celtic Library, . . . . .	10	0	0
<b>VII. Contributions to cost of New Buildings—</b>		1,142	0 6
(a) Balance from 1904-5, . . . . .	£691	14	6
(b) Carnegie Trust, . . . . .	10,795	0	0
(c) Equipment Fund, . . . . .	13,250	0	0
(d) Advance by University, . . . . .	2,727	18	4
	£27,464	12	10
Less Balances on hand, . . . . .		12	12 9
		27,452	0 1
<b>VIII. Contributions to New Endowments—</b>			
(a) Carnegie Trust, . . . . .	£2,000	0	0
(b) Mr. J. N. Kiep, . . . . .	1,000	0	0
(c) Mrs. M'Intyre's Bequest, . . . . .	500	0	0
		3,500	0 0
		<u>£102,314</u>	<u>4 2<math>\frac{3}{4}</math></u>



Brought forward, . . . . . £59,791 9 7

X. Observatory, . . . . . 350 8 4½

XI. University Buildings—

(a) Maintenance of Buildings, Upkeep of Grounds, Watching, Service, Cleaning, etc., . . . . .	£4,711 2 11	
(b) Lighting (including Motive Power, £201 13s. 2d.), . . . . .	853 15 1	
(c) Heating and Ventilating, . . . . .	1,221 3 3½	
(d) Water, . . . . .	118 14 8	
(e) Pathological Institute at Western Infirmary, . . . . .	331 19 10	
(f) Telephone Rentals and Operator's Wages, . . . . .	93 4 4	
(g) Insurance, . . . . .	355 14 2	
(h) Public Burdens, Taxes, etc. (including £21 to Glasgow Police), . . . . .	1,061 10 9½	
(i) Taxes, Repairs, Lighting, Heating, Service, etc., at Queen Margaret College, . . . . .	763 18 0½	
		9,512 3 1¼

XII. Interest, . . . . . 851 18 7

XIII. Bursaries, . . . . . 184 5 7

XIV. Chapel, . . . . . 59 1 4

XV. Entertainments—

(a) Graduation Conversazione, . . . . .	£31 4 0	
(b) Commemoration Meeting, . . . . .	66 12 6	
		97 16 6

XVI. Miscellaneous, . . . . . 162 0 9

XVII. New Buildings—

(a) Natural Philosophy . . . . .	£12,755 6 6	
(b) Physiology, Materia Medica, and Forensic Medicine, . . . . .	12,172 4 6	
(c) Chemistry, . . . . .	2,524 9 1	
		27,452 0 1

XVIII. For New Endowments—

(a) Chair of Geology, . . . . .	£2,000 0 0	
(b) Chair of German, . . . . .	1,000 0 0	
(c) Alexander Manderson Bursary, . . . . .	500 0 0	
		3,500 0 0

	£101,961 3 10¾
Surplus, . . . . .	353 0 4
	<u>£102,314 4 2¾</u>

		CLASS FEES.					
I. Faculty of Arts—							
Humanity,	.	.	.	.	£1128	15	0
Greek,	.	.	.	.	349	2	6
English,	.	.	.	.	733	19	0
French,	.	.	.	.	481	19	0
German,	.	.	.	.	160	13	0
Italian,	.	.	.	.	9	9	0
Hebrew,	.	.	.	.	175	7	6
Logic,	.	.	.	.	832	2	0
Moral Philosophy,	.	.	.	.	655	4	0
Political Economy,	.	.	.	.	233	2	0
Education,	.	.	.	.	428	8	0
Philosophy of Law,	.	.	.	.	—		
Mathematics,	.	.	.	.	1,257	7	6
Natural Philosophy,	.	.	.	.	610	1	0
Chemistry,	.	.	.	.	276	3	0
Botany,	.	.	.	.	120	15	0
Zoology,	.	.	.	.	79	16	0
Astronomy,	.	.	.	.	—		
Geology,	.	.	.	.	36	15	0
History,	.	.	.	.	475	13	0
Constitutional Law,	.	.	.	.	149	2	0
Roman Law,	.	.	.	.	96	12	0
					£8,290 5 6		
II. Faculty of Science—							
Political Economy,	.	.	.	.	£3	3	0
Astronomy,	.	.	.	.	35	14	0
Engineering,	.	.	.	.	1,348	14	6
Naval Architecture,	.	.	.	.	179	11	0
Geology,	.	.	.	.	138	12	0
Mathematics,	.	.	.	.	380	2	0
Natural Philosophy,	.	.	.	.	855	4	6
Chemistry,	.	.	.	.	799	1	0
Botany,	.	.	.	.	111	6	0
Zoology,	.	.	.	.	79	16	0
Physiology,	.	.	.	.	26	5	0
Anatomy,	.	.	.	.	21	0	0
Mining,	.	.	.	.	16	16	0
Public Health,	.	.	.	.	130	4	0
					4,125 9 0		
III. Faculty of Medicine—							
Botany,	.	.	.	.	£763	7	0
Zoology,	.	.	.	.	822	3	0
Physics,	.	.	.	.	549	3	0
Chemistry,	.	.	.	.	1,083	12	0
Anatomy,	.	.	.	.	1,890	0	0
Physiology,	.	.	.	.	855	15	0
Materia Medica,	.	.	.	.	800	2	0
Pathology,	.	.	.	.	882	10	6
Forensic Medicine,	.	.	.	.	441	0	0
Carry forward,					£8,087	12 6	£12,415 14 6



Brought forward, . . . . .	£12,415 14 6	
Faculty of Medicine— <i>continued</i> . . . . .	£8,087 12 6	
Surgery, . . . . .	767 11 0	
Clinical Surgery, . . . . .	197 7 6	
Practice of Medicine, . . . . .	375 18 0	
Clinical Medicine, . . . . .	141 8 5	
Midwifery, . . . . .	487 4 0	
Insanity, . . . . .	168 0 0	
IV. Faculty of Law—		10,225 1 5
Law, . . . . .	£332 17 0	
Conveyancing, . . . . .	168 0 0	
Constitutional Law and History, . . . . .	54 12 0	
Civil Law, . . . . .	71 8 0	
Jurisprudence, . . . . .	53 11 0	
Public International Law, . . . . .	44 2 0	
International Private Law, . . . . .	69 6 0	
Political Economy, . . . . .	9 9 0	
Forensic Medicine, . . . . .	63 0 0	
Mercantile Law, . . . . .	264 12 0	
V. Faculty of Theology—		1,130 17 0
Divinity, . . . . .	£140 3 6	
Church History, . . . . .	127 0 0	
Biblical Criticism, . . . . .	85 1 0	
Hebrew (see under Faculty of Arts), . . . . .	—	
		352 4 6
VI. Non-qualifying Classes, . . . . .		1,041 6 6
		£25,165 3 11
Deduct Fees returned, . . . . .		14 3 6
		<u>£25,151 0 5</u>

## XVI.—GLASGOW PROVINCIAL COMMITTEE FOR THE TRAINING OF TEACHERS.

### SUB-COMMITTEE ON UNIVERSITY STUDENTS.

*Chairman*—Professor Latta, M.A., D.Phil.

*Director of Studies*—Mr. D. Macleod, M.A.

*Master of Method*—Mr. Hugh M'Callum, M.A.

*Mistress of Method and Warden of Women Students*—Miss  
Helen Rutherford, M.A.

### ARRANGEMENTS FOR SESSION 1907-08.

#### I. ADMISSION TO TRAINING.

THE conditions of admission to full training at the University are as follows :

##### *A. Permanent Standard of Admission.*

The following classes of persons are eligible for admission :

1. Persons who have obtained the Junior Students' Certificate (Arts. 10-13).<sup>1</sup> [No candidate can qualify under this head before "the end of the second year" (Art. 8), that is, before the end of the session 1907-08.]

2. Persons who hold the Leaving Certificate, or who have successfully completed a course of instruction equivalent to the Leaving Certificate Curriculum (Art. 15*b*). Candidates seeking admission under this head must have undergone a course of practical training for six months in a school approved by the Department for that purpose, and must be able to produce certificates testifying to good conduct and aptitude for teaching (Arts. 11 and 12).

[Candidates from Junior Student Centres may qualify under this head, provided they have undergone the requisite course of practical training. But see head 1 (*a*) under Temporary Provisions below.]

3. Graduates in Arts or Science, including, for the purposes of the Regulations, "Women who have been placed on the Class Lists of one or other of the Final Honours Examinations in the University of Oxford or the University of Cambridge" (Art. 15 (*c*) and footnote).

##### *B. Temporary Provisions.*

The following classes of persons may also be admitted to training in the Session 1907-08, viz.:

<sup>1</sup> The articles referred to are articles of the Regulations for the Training of Teachers, published by Messrs. Oliver & Boyd, price 3s., by post 4s. 6d.

## 1. Any candidate who

(a) has passed the Preliminary Examination of any of the Scottish Universities ; or

(b) has obtained a pass in the Higher Grade at the Leaving Certificate Examination in at least *three* subjects, of which one must be English, one Mathematics, and one an Ancient or Modern Foreign Language, and who has obtained a satisfactory report upon his or her practical skill in teaching, and, in the case of girls, in Needlework (Art. 73a).

N.B.—“A satisfactory certificate as to health and physical fitness in a form prescribed by the Department” must be produced by every candidate (Art. 16).

## II. DURATION OF PERIOD OF TRAINING.

The period of Training will extend to :

1. Not less than *one* year in the case of graduates.
2. Not less than three years in the case of students other than graduates, who have been admitted to a definite course of instruction and training at the University.

## III. UNIVERSITY STUDENTS.

Three classes of University Students are contemplated :

1. Those who aim at securing the General Certificate (Art. 33), but do not desire to proceed to graduation. Students in this group must have passed the examination for the Leaving Certificate, or its equivalent, in all the subjects included in their University curriculum, so far as those are Leaving Certificate subjects, and they must have passed in the higher grade in not less than *three* such subjects.

2. Those who intend to graduate.

These students must have passed the *complete* Preliminary Examination (including Higher Latin and Intermediate or Higher Mathematics) or its equivalent, before the opening of the winter session, 1907-08.

3. Those who propose to graduate with honours.

*Curriculum.*—In each case the course of instruction and training will be according to a special curriculum proposed by the Provincial Committee and approved by the Department. In all cases the curriculum will provide for the instruction and training of University students in the professional subjects. When necessary, this provision will take the form of non-University classes and practical training in the schools.

## IV. FEES.

1. The fee charged for instruction and training in non-University subjects in terms of Art. 30 is £10 per annum. The fee may be paid by the student, or it may be remitted in whole or in part by the Committee.

2. Students who pay fees in full and receive no bursary or maintenance allowance will not be bound in any way as regards their future employment (Art. 32).

3. The University fees must be paid by the students. The Committee may, however, on good cause being shown, grant bursaries or maintenance allowances out of which the fees may in whole or in part be paid.

#### V. BURSARIES OR MAINTENANCE ALLOWANCES.

1. Under Art. 30 the Committee are empowered to make payment of such bursaries or maintenance allowances as, after due enquiry, they deem necessary.

2. Every Bursary or Maintenance Allowance will carry with it a remission of the £10 fee for non-University subjects.

3. *Scale of Bursaries.*—The amount of the lowest bursary will be £5, and the bursaries will rise by increments of £2 10s. to a maximum of £30.

4. *Obligation of Bursars.*—The amount of the obligation incurred to the Committee by students who have received bursaries or maintenance allowances may accordingly vary from £15 in respect of the minimum grant for one year to £120 in respect of the maximum grant for three years.

5. In the event of the number of applications for bursaries of any one class being greater than the number of bursaries allocated to that particular class, the decision of the Committee will be determined by a consideration of the circumstances of the applicants.

6. Any Bursary or Maintenance Allowance may be suspended, reduced, or withdrawn at any time, if in the opinion of the Committee—and the Committee will be the sole and final judge in the matter—the holder is guilty of serious misconduct, or fails to make reasonable progress, or is in such circumstances that assistance from the Committee is no longer necessary.

#### VI. PERIODS OF SERVICE.

1. The grant to be made by the Committee will be of the nature of an advance, and not of a free gift. It can, however, be repaid by means of service in state-aided schools in Scotland, so that in the end the teacher may be in the position of having entirely paid for his professional training.

2. The period of service required will vary with the amount of benefit received. The minimum period will be two years, and the maximum period five years.

3. In the event of failure to give the requisite service within a specified time, except for reasons approved by the Committee as satisfactory, the teacher will be required to make repayment of the advances made to him, or of such part thereof as may not have been cancelled by service, and the student, before receiving a grant, will be required to give adequate security for such repayment.

4. In the case, however, of teachers who have earned their Parchment Certificate, and have completed a further period of service of one year, the Provincial Committee may, on good cause being shown, consider what part (if any) of the sum still repayable may be remitted.

TABLE SHOWING SCALE OF BURSARIES WITH RELATIVE PERIODS OF SERVICE.

Grant per Annum.	One Year's Course.		Two Years' Course.		Three Years' Course.	
	Amount received.	Years' Service.	Amount rec'd.	Years' Service.	Amount received.	Years' Service.
£10 fee remitted, - -	£10	Two	£20	Two	£30	Two
£5, plus £10 fee remitted,	£15	"	£30	"	£45	Three
£7 10s. "	£17 10s.	"	£35	Three	£52 10s.	"
£10 "	£20	"	£40	"	£60	"
£12 10s. "	£22 10s.	"	£45	"	£67 10s.	Four
£15 "	£25	"	£50	"	£75	"
£17 10s. "	£27 10s.	"	£55	"	£82 10s.	"
£20 "	£30	"	£60	"	£90	"
£22 10s. "	£32 10s.	Three	£65	Four	£97 10s.	Five
£25 "	£35	"	£70	"	£105	"
£27 10s. "	£37 10s.	"	£75	"	£112 10s.	"
£30 "	£40	"	£80	"	£120	"

## VII. LODGINGS AND SUPERVISION OF STUDENTS.

1. The Provincial Committee is under obligation to see that the students under its charge "are suitably lodged in approved Hostels or otherwise, and to provide for their due supervision as regards conduct." (Art. 26.)

2. The Committee may require every student who is not residing with parents or other near relatives to reside in an approved Boarding House, or in lodgings registered by the Committee, after inspection, as suitable for students (Art. 28). A list of such lodgings may be obtained on application.

Forms of application for Admission and Maintenance Allowances may be obtained by applying to the Director of Studies, The Technical College, Glasgow.

NOTE.—It will be seen from the foregoing Regulations of the Provincial Committee that students who wish to obtain a qualification to teach in Primary Schools may combine a course leading to graduation with the necessary professional training. This course covers three complete years, but the work necessary for a Degree, combined with all the professional training and practice given by the Committee, would be done to greater advantage if four years could be devoted to it.

For a qualification to teach in Secondary Schools an Honours Degree is practically required, the study for which occupies four years. This must be followed by one year of study attendance in the subject of professional training specified in Article 22 of the Regulations.

## *XVII.—EXTRA-ACADEMICAL TEACHING.*

*N.B.*—Every application for recognition must be accompanied by a payment to the University Factors, Messrs. Hill & Hoggan, 194 Ingram Street, Glasgow, of a fee of £5 5s. to be placed to the credit of a fund for defraying the cost of investigation by experts of the fitness of the teacher applying, and of the accommodation, apparatus, and teaching appliances at the disposal of the teacher.

The following regulations for the recognition of Extra-Academical Teaching under Ordinances Nos. 12, 14, 23, and 134, were adopted by the University Court on 14th June, 1894, and afterwards amended in June, 1905.

### IN THE CASE OF INDIVIDUAL EXTRA-ACADEMICAL TEACHERS.

I. Every application shall be made to the Secretary of the University-Court and shall supply the following information:—

- (a) The registrable or other qualification or qualifications of the applicant.
- (b) A statement of his opportunities of studying the subject and the length of time devoted thereto.
- (c) A statement of his experience in teaching the subject.
- (d) A note of any of his published articles or works on the subject.
- (e) The appointments which he holds as a teacher of the subject in which he requests recognition, and a statement whether the course for which recognition is sought has previously been conducted by him, and if so, for how long. If the applicant is a teacher in a Medical School, College of Science, or other similar Institution, the most recent issue of the Calendar of such School, College, or Institution, should be forwarded.
- (f) The number of meetings to which the course extends, whether each meeting is for one hour or longer, and a statement of the proportion of the course to be devoted to lectures, practical demonstrations, examinations and tutorial work. In the case of a practical course, information should be given as to the manner of conducting it, the number of examinations, oral or written, and whether or to what extent lectures or tutorial work form part of the course. It should also be stated whether, besides the teacher for whom recognition is sought, assistants or demonstrators take part in conducting the course (whether systematic or practical), and, if so, their number, qualifications, and the extent to which they take part in conducting the course. A syllabus of the subjects treated in the course and of the books proposed for the use of students should also be sent in every case.

- (g) The hour or hours at which the course is conducted.
- (h) The accommodation, apparatus, and teaching appliances provided for the class.
- (i) The teaching or examining bodies which have recognized his course.

II. In the case of an applicant conducting courses in Glasgow or its neighbourhood an inspection shall be made of his accommodation and appliances for teaching.

III. Every Extra-Academic Teacher in Glasgow whose course has been recognized under any of the Ordinances enumerated above, shall, at the commencement of each session, call the attention of his whole class to the regulations as to enrolment and payment of fee at the University by all students who desire afterwards to graduate there; he shall also call attention to the University requirements as to preliminary examination (more stringent in the case of medical students than the minimum required by the General Medical Council); and shall advise any students looking forward to a University degree to procure from the Matriculation Office a copy of the syllabus of regulations applicable to their course.

IV. Every recognized Extra-Academical Teacher shall annually within one month of the close of the session furnish the University Court with a return of

- (a) The number of students who have attended the recognized course or courses, in such manner as to qualify *pro tanto* for graduation in a Scottish University.
- (b) Any change that may have been made in the accommodation or appliances provided.
- (c) A statement showing, for the year next ensuing, the number of meetings to which the course extends, whether each meeting is for one hour or longer, and the proportion of the course to be devoted to lectures, practical demonstrations, examinations, and tutorial work. In the case of a practical course information should be given as to the manner of conducting it, the number of examinations, oral or written, and whether, or to what extent lectures or tutorial work form part of the course. It should also be stated whether, besides the recognized teacher, assistants, or demonstrators take part in conducting the course (whether systematic or practical), and if so, their number, qualifications, and the extent to which they take part in conducting the course. A syllabus of the subjects to be treated in the course, and of the books proposed for the use of students, should also be sent.

V. The certificate of attendance granted by Extra-Academical Teachers should in all cases state the number of lectures or meetings for practical instruction in the course, the number of occasions on which the student was present, the fee charged, and bear that the student has duly performed the work of the class.

VI. Every candidate not being a matriculated student attending the course of an Extra-Academical Teacher in Glasgow, recognized for the purposes of graduation in Medicine or Science, must at the

commencement of each year enrol his name in a book kept at the University for that purpose, paying a fee of the same amount as the matriculation fee, and having in respect thereof a right to the use of the University Library. (Ord. No. 12, § V. ; Ord. No. 14, § VIII. 5 ; Ord. No. 23, § VI. ; Ord. No. 134, § V.)

VII. The fee for attendance for the purposes of graduation on the courses of instruction of an Extra-Academical Teacher in Glasgow shall not be less than the fee for the corresponding University Class. (Ord. No. 12, § IV. 2 ; Ord. No. 14, § VIII. 6 ; Ord. No. 23, § IV. 2 ; Ord. No. 134, § V. 2.)

VIII. The Court will not in any case recognize for the purposes of graduation in Medicine the course of any teacher who teaches at the same time more than one of the subjects, except where the applicant is a professor or teacher of any endowed public college or institution, who, by the terms of his appointment, is required to teach more than one of the subjects, and in that case recognition can be granted in one subject only. (Ord. No. 14, § VIII. 7.)

IX. It is a condition of every recognition granted by the Court that it can be withdrawn or suspended at any time if the Court see fit.

X. The recognition of any teacher who fails to furnish the information required in terms of Regulation IV., or a sufficient explanation relative to such failure, or who has ceased for the period of two consecutive sessions to teach the subject in which he is recognized, shall *ipso facto* terminate.

#### IN THE CASE OF SCHOOLS OR INSTITUTIONS.

I. Every application shall be made to the Secretary of the University Court, and shall supply the following information :—

- (a) A statement of the number of teachers and a detailed syllabus of the curriculum courses proposed to be given, or, in the case of practical classes, information of a similar kind.
- (b) The number and duration of lectures proposed to be given and the number of examinations, whether written or oral, deemed necessary, or in the case of a practical class, information of a similar kind. It should also be stated whether assistants or demonstrators take part in conducting the courses (whether systematic or practical).
- (c) The hours of lectures.
- (d) The teaching or examining bodies which have already recognized the curriculum or certificate of the school or institution making application.
- (e) A statement as to the accommodation, apparatus, and appliances at the disposal of the teachers in the school or institution making application.
- (f) A note of the fees proposed to be charged.

II. The Court shall, if it thinks fit, cause an inspection to be made of the accommodation, apparatus, and teaching appliances provided by the school or institution making application.

III. Every recognized school or institution shall annually within one month of the close of the session furnish the University Court with a return of



- (a) The number of students who have attended the recognized school or institution in such manner as to qualify *pro tanto* for graduation in the University.
- (b) Any change that may have been made in the accommodation or appliances provided.
- (c) A statement showing, for the year next ensuing, the number of meetings to which the courses extend, whether each meeting is for one hour or longer, and the proportion of the courses to be devoted to lectures, practical demonstrations, examinations, and tutorial work. In the case of practical courses information should be given as to the manner of conducting them, the number of examinations, oral or written, and whether, or to what extent, lectures or tutorial work form part of the courses. It should also be stated whether assistants or demonstrators take part in conducting the courses (whether systematic or practical).

IV. The certificates of attendance granted by recognized schools or institutions should in all cases state the number of lectures or meetings for practical instruction in the courses, the number of occasions on which the student was present, the fees charged, and bear that the student has duly performed the work of the classes.

V. The fees for attendance for the purposes of graduation on the courses of instruction in a recognized school or institution shall not be less than the fees for the corresponding University classes. (Ord. No. 12, § IV. 2; Ord. No. 14, § VIII. 6; Ord. No. 23, § IV. 2; Ord. No. 134, § IV. 2.)

VI. It is a condition of every recognition granted by the Court that it can be withdrawn or suspended at any time if the Court see fit.

## LIST OF EXTRA-ACADEMICAL TEACHERS.

List of Extra-Academical Teachers recognized by the University Court of the University of Glasgow, for the purpose of Graduation in Medicine and Science, in terms of Ordinances of the Universities Commissioners (1858 and 1889), the names of those who are recognized for Graduation in Science being printed in *italics*.

19 April, 1876,	Dr. James Gow Black, Otago,	<i>Chemistry.</i>
"	Miller Coughtrey, M.B., Otago,	<i>Anatomy.</i>
7 Nov., 1876,	John Dougall, M.D., Glasgow,	<i>Materia Medica.</i>
12 Sept., 1877,	A. M. Buchanan, M.D., Glasgow,	<i>Anatomy.</i>
21 Dec., 1880,	William Craig, M.D., Edinburgh,	<i>Materia Medica and Therapeutics.</i>
24 May, 1881,	Byrom Bramwell, M.D., Edinburgh,	<i>Practice of Medicine.</i>
22 July, 1885,	Reginald W. Phillips, B.A., B.Sc., University Coll., Bangor,	<i>Botany.</i>
4 Oct., 1887,	Claud M. Thompson, University College, Cardiff,	<i>Chemistry.</i>

4 Oct., 1887,	W. Newton Parker, University College, Cardiff,	<i>Zoology.</i>
27 Feb., 1890,	James Robertson Watson, M.A., Glasgow,	<i>Chemistry and Practical Chemistry.</i>
„	Philip J. White, M.B., University College, Bangor,	<i>Zoology.</i>
28 April, 1892,	James Swanson, M.A., M.B., C.M., St. Mungo's Coll., Glasgow,	<i>Botany.</i>
23 Feb., 1893,	J. W. Carr, M.A., University College, Nottingham,	<i>Botany.</i>
27 April, 1893,	G. G. Henderson, D.Sc., Glasgow and West of Scotland Technical College [also for Medicine],	<i>Chemistry.</i>
20 July, 1893,	J. Berry Haycraft, M.D., University College, Cardiff,	<i>Physiology.</i>
9 Nov., 1893,	J. F. King, Edinburgh,	<i>Chemistry.</i>
„	F. W. N. Haultain, M.D., Edinburgh,	<i>Midwifery.</i>
„	G. A. Gibson, M.D., Edinburgh,	<i>Practice of Medicine.</i>
„	R. W. Philip, M.D., Edinburgh,	<i>Practice of Medicine.</i>
14 Nov., 1893,	Dawson Turner, M.D., Edinburgh,	<i>Physics.</i>
8 Feb., 1894,	J. W. B. Hodsdon, M.D., Edinbro',	<i>Surgery.</i>
„	H. E. Clark, C.M.G., M.R.C.S., Glasgow,	<i>Surgery.</i>
14 June, 1894,	George T. Beatson, M.D., Glasgow,	<i>Surgery.</i>
„	Francis M. Caird, M.B., C.M., Edin.,	<i>Surgery.</i>
„	Alexander James, M.D., School of Medicine, Edinburgh,	<i>Practice of Medicine.</i>
„	William Russell, M.D., School of Medicine, Edinburgh,	<i>Pathology and Practical Pathology.</i>
„	Henry Alexis Thomson, M.D., Minto House, Edinburgh,	<i>Surgery.</i>
2 Aug., 1894,	George B. Todd, M.B., C.M., Anderson's College, Glasgow,	<i>Zoology.</i>
13 Dec., 1894,	R. Stanfield, A.R.S.M., A.M. Inst. C.E., Heriot Watt Coll., Edin.,	<i>Mechanical Engineering.</i>
„	John Gibson, Ph.D., Heriot Watt College, Edinburgh,	<i>Chemistry and Chemical Laboratory.</i>
14 Feb., 1895,	A. H. Trow, B.Sc., University College, Cardiff,	<i>Botany.</i>
12 Dec., 1895,	Peter Bennett, Anderson's College Medical School, Glasgow,	<i>Physics.</i>
9 Jan., 1896,	Charles Workman, M.D., Royal Infirmary, Glasgow,	<i>Pathology and Practical Pathology.</i>
18 June, 1896,	John Edgar, M.A., B.Sc., M.B., Anderson's College Medical School, Glasgow,	<i>Midwifery.</i>
„	George A. Gibson, M.A., LL.D., Glasgow and West of Scotland Technical College,	<i>Mathematics.</i>

9 July, 1896,	<i>Alexander MacLay, B.Sc., C.E.,</i> Glasgow and West of Scotland Technical College,	<i>Engineering Drawing and Design.</i>
12 Nov., 1896,	<i>John Lindsay Steven, M.D., Glasg.,</i>	<i>Practice of Medicine.</i>
„	<i>Francis G. Baily, M.A., Heriot</i> Watt College, Edinburgh,	<i>Physics and Electrical Engineering.</i>
6 May, 1897,	<i>Richard J. A. Berry, M.D.,</i> F.R.C.S.E., New School of Medicine, Edinburgh,	<i>Anatomy.</i>
9 June, 1898,	<i>John Carswell, L.F.P.S.G.,</i> L.R.C.P.E., Anderson's Col- lege Medical School, Glasgow,	<i>Mental Diseases.</i>
„	<i>J. R. Whitaker, M.B., Surgeon's</i> Hall, Edinburgh,	<i>Anatomy and Prac- tical Anatomy.</i>
10 Nov., 1898,	<i>Hugh Galt, M.B., C.M., St. Mungo's</i> College,	<i>Forensic Medicine and Public Health.</i>
„	<i>Robert A. Fleming, M.D., School</i> of Medicine, Edinburgh,	<i>Practice of Medicine.</i>
13 July, 1899,	<i>A. L. Selby, M.A., University</i> Coll. of South Wales, Cardiff,	<i>Physics.</i>
„	<i>D. R. Paterson, M.B., University</i> Coll. of South Wales, Cardiff,	<i>Practical Pharmacy.</i>
9 Nov., 1899,	<i>Theodore Shennan, M.D., School</i> of Medicine, Edinburgh,	<i>Pathology.</i>
26 April, 1900,	<i>Carstairs C. Douglas, B.Sc., M.D.,</i> Anderson's College Medical School, Glasgow,	<i>Medical Jurispru- dence and Public Health.</i>
10 July, 1900,	<i>J. C. Beattie, D.Sc., South African</i> College, Cape Town,	<i>Natural Philosophy.</i>
„	<i>P. D. Hahn, Ph.D., South African</i> College, Cape Town,	<i>Chemistry.</i>
14 Mar., 1901,	<i>John W. Paterson, West of Scotland</i> Agricultural College,	<i>Agricultural Chem- istry.</i>
„	<i>A. N. M'Alpine, West of Scotland</i> Agricultural College,	<i>Agricultural Botany.</i>
„	<i>J. J. F. X. King, West of Scotland</i> Agricultural College,	<i>Agricultural Ento- mology.</i>
„	<i>John R. M'Call, West of Scotland</i> Agricultural College,	<i>Veterinary Hygiene.</i>
3 Oct., 1901,	<i>Alexander Macphail, M.B., St.</i> Mungo's College,	<i>Anatomy.</i>
14 Nov., 1901,	<i>T. K. Monro, M.A., M.D., St.</i> Mungo's College,	<i>Practice of Medicine.</i>
1 May, 1902,	<i>Marion T. Newbigin, D.Sc.,</i> Medical College for Women, Edinburgh,	<i>Zoology.</i>
10 July, 1902,	<i>Harry Bamford, M.Sc., West of</i> Scotland Agricultural College,	<i>Agricultural Engin- eering.</i>
1 Dec., 1902,	<i>Daniel Burns, Glasgow and West</i> of Scotland Technical College,	<i>Geology.</i>

- 18 June, 1903, *Magnus Maclean, M.A., D.Sc.*,  
Glasgow and West of Scotland Technical College, *Electrical Engineering.*
- 18 June, 1903, *John G. Longbottom, A.R.C.S.*,  
Glasgow and West of Scotland Technical College, *Civil and Mechanical Engineering.*
- „ *Hamilton C. Marr, M.D.*,  
F.F.P.S.G., St. Mungo's College, Glasgow, *Insanity.*
- „ *James H. Nicoll, M.B., F.F.P.S.G.*,  
Anderson's College Medical School, Glasgow, *Surgery.*
- „ *Archibald A. Scot Skirving, C.M.G., M.B., M.R.C.S. (Eng.), F.R.C.S. (Edin.)*, 27 Nicolson Square, Edinburgh, and School of Medicine of the Royal Colleges, Edinburgh, *Surgery.*
- 12 Nov., 1903, *Gilbert Thomson, M.A., C.E.*,  
Glasgow and West of Scotland Technical College, *Sanitary Engineering.*
- „ *Daniel Burns*, Glasgow and West of Scotland Technical College, *Mining.*
- 11 Feb., 1904, *John H. A. McIntyre, M.I.M.E.*,  
Glasgow and West of Scotland Technical College, *Mensuration and Drawing.*
- 21 July, 1904, *J. C. Beattie, D.Sc.*, South African College, Cape Town, and *Alexander Brown, B.A., B.Sc.*, South African College, Cape Town, conjointly, *Physics.*
- „ *H. H. W. Pearson, M.A.*, South African College, Cape Town, *Botany.*
- „ *H. H. W. Pearson, M.A.*, South African College, Cape Town, *Botany for First B.Sc.*
- „ *G. H. Gemmell*, School of Medicine of the Royal Colleges, Edinburgh, *Practical Chemistry.*
- „ *David Hepburn, M.D.*, University College, Cardiff, *Anatomy and Practical Anatomy.*
- „ *Robert Jardine, M.D.*, St. Mungo's College, Glasgow, *Midwifery.*
- 9th Feb., 1905, *Alexander Bruce, M.D.*, Surgeon's Hall, Edinburgh, *Practice of Medicine.*
- „ *Leonard A. L. King, B.A.*, St. Mungo's College, Glasgow, *Zoology.*
- 8 June, 1905, *R. F. Muirhead, D.Sc.*, Western Medical School, Glasgow, *Mathematics.*
- „ *W. F. A. Hudson, M.A.*, West of Scotland Agricultural College, *Forestry.*

8 June, 1905,	R. Barclay Ness, M.A., M.B., Anderson's College Medical School,	<i>Practice of Medicine.</i>
"	Leonard A. L. King, B.A., St. Mungo's College, Glasgow,	<i>Zoology for First B.Sc.</i>
6 July, 1905,	John M. Cowan, B.A., M.D., D.Sc., Western Medical School, Glasgow,	<i>Practice of Medicine.</i>
"	George H. Edington, M.D., M.R.C.S., Western Medical School, Glasgow,	<i>Surgery.</i>
14 Dec., 1905,	David A. Farquharson, M.B., St. Mungo's College, Glasgow,	<i>Physiology.</i>
"	A. Ogg, M.A., B.Sc., Rhodes University College, Grahams- town, Cape Colony,	<i>Physics.</i>
"	George E. Cory, M.A., Rhodes University College, Grahams- town, Cape Colony,	<i>Chemistry.</i>
"	S. Schönland, Ph.D., Rhodes Uni- versity College, Grahamstown, Cape Colony,	<i>Botany.</i>
"	J. E. Duerden, Rhodes Univer- sity College, Grahamstown, Cape Colony,	<i>Zoology.</i>
"	J. D. F. Gilchrist, M.A., D.Sc., South African College, Cape Town,	<i>Zoology.</i>
"	J. D. F. Gilchrist, M.A., D.Sc., South African College, Cape Town,	<i>Zoology for First B.Sc.</i>
"	J. A. Wilkinson, M.A., Transvaal Technical Institute, Johannes- burg,	<i>Chemistry.</i>
"	H. Lyster Jameson, M.A., D.Sc., Transvaal Technical Institute, Johannesburg,	<i>Zoology.</i>
4 Oct., 1906,	Robert Broom, M.D., D.Sc., Vic- toria College, Stellenbosch, South Africa,	<i>Zoology.</i>
"	Angusta V. Duthie, M.A., Vic- toria College, Stellenbosch, South Africa,	<i>Botany.</i>
1 Nov., 1906,	G. Balfour Marshall, M.D., West- ern Medical School, Glasgow,	<i>Obstetrics and Gynæ- cology.</i>
13 Dec., 1906,	R. A. Berry, West of Scotland Agricultural College, Glas- gow,	<i>Agricultural Chem- istry.</i>
"	A. L. Mellanby, D.Sc., Glasgow and West of Scotland Techni- cal College,	<i>Mechanical Engin- eering.</i>

- 14 Feb., 1907, John Bryce, Burgh Surveyor, *Mensuration and Partick, Drawing.*  
 11 April, 1907, Alan W. C. Menzies, M.A., B.Sc., *Chemistry and Practical Chemistry.*  
 ,, St. Mungo's College, Glasgow,  
 Peter Paterson, M.B., St. Mungo's College, Glasgow, *Surgery.*

And the ordinary Physicians and Surgeons of any General Hospital in the United Kingdom which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons. (See Ordinance No. 14, Section VII. (5).)

### LIST OF INSTITUTIONS OR SCHOOLS.

List of Schools or Institutions recognized by the University Court of the University of Glasgow, for the purpose of Graduation in Medicine, Law, Science, and Theology, in terms of Ordinances of the Universities Commission (1889).

- 14 Nov., 1895, LONDON SCHOOL OF MEDICINE FOR WOMEN, in respect of the following courses: *Chemistry (Systematic and Practical), Anatomy (Systematic and Practical), Physiology (Systematic and Practical), Practical Pharmacy, Practical Pathology, Medical Jurisprudence and Public Health, Clinical Surgery, Clinical Medicine, Practical Midwifery, Mental Diseases, Out-Practice or Dispensary and Vaccination.*
- 23 Mar., 1896, UNIVERSITY OF NEW ZEALAND. If a candidate for the First Professional Examination in this University has obtained a Degree in Science or in Arts in the University of New Zealand, granted after a course of study and an examination in Botany, Zoology, Physics, or Chemistry, such candidate is exempted from the examination in such subject or subjects. (Ordinance No. 54, Section IV.)
- 23 July, 1896, UNIVERSITIES OF OXFORD, CAMBRIDGE, AND DUBLIN, AND THE FOUR INNS OF COURT, LONDON. The above are recognized for the purposes of Graduation in Law under Ordinance No. 39 [General No. 11.—Regulations for the Degree of Bachelor of Laws (LL.B.)] and subject to Section II. thereof.
- 11 Mar., 1897, GLASGOW EYE INFIRMARY.
- 10 Nov., 1898, UNIVERSITY OF LOUVAIN. This University has been approved by the University Court as a University in which Courses for the four subjects represented in the First Science Examination may be taken and reckoned *pro tanto* under Ordinance No. 23, Section IV. (2).

- 13 April, 1899, HARVARD UNIVERSITY, BOSTON, U.S.A. Approved under Ordinance No. 23, Section IV.
- 12 June, 1902, WESTMINSTER COLLEGE, CAMBRIDGE. Recognized under Ordinance No. 63, Section I.
- 12 Nov., 1903, UNIVERSITY OF NEW ZEALAND. Recognized under Ordinance No. 63, Section I.
- 10 Nov., 1904, THEOLOGICAL COLLEGE OF THE EPISCOPAL CHURCH IN SCOTLAND. Recognized under Ordinance No. 63, Section I.
- 6 July, 1905, ROYAL INSTITUTE OF PUBLIC HEALTH, LONDON. Recognized for the purposes of Section IV., Sub-Section (1) of Ordinance No. 2 of the University Court (Degrees in Science in Public Health).
- „ ROYAL ARMY MEDICAL COLLEGE. Recognized for the same purposes as the preceding.
- 11 April, 1907, GLASGOW AND WEST OF SCOTLAND TECHNICAL COLLEGE, BACTERIOLOGICAL LABORATORIES. Recognized for the same purposes as the preceding.

## XVIII.—UNIVERSITY SOCIETIES.

### GLASGOW UNIVERSITY UNION.

At a Meeting of Students and Graduates, held on the 14th day of February, 1885, it was unanimously resolved to establish a Glasgow University Union. A sum sufficient to erect a building for this purpose having been offered to the Senate by the late JOHN M'INTYRE, Esq., M.D., Odiham, Hampshire, and the Senate having accepted this gift. Articles of Constitution were drawn up by a Committee of Students and Graduates, and received the approval of the Senate, the Donor, and of the Students' Representative Council. A further sum of £12,000 was raised by the Union Bazaar of 1889, and devoted to furnishing and endowing the building. In 1893, to meet the increasing membership, the building was largely extended at a cost of £2800. The Union is governed by a Committee of Management which is elected annually at the General Meeting of the Members.

*Objects.*—The objects of the Union are to provide Students with the comforts and conveniences of a Social Club, to hold debates, and to form a centre to which the various University Societies may be affiliated. The Buildings comprise a Debating Hall, a Dining Hall, Reading and News Rooms. Billiard and Smoking Rooms, Committee Rooms, Lavatories, etc.

*Membership.*—The Members of the Union are Ordinary Members or Life Members.

Ordinary membership of the Union is open to all matriculated Students and all former Students of the University, and all Medical Students of Glasgow whose names are enrolled in the Extra-mural Album of the

University, on payment of an Annual Subscription of Seven Shillings and Sixpence. Students may join for the summer Session only, on payment of Four Shillings.

All matriculated Students and former Students of the University may, on payment of the sum of Three Pounds Three Shillings, become Life Members of the Union.

*President*—A. S. Wallace.

*Vice-President*—James MacLehose, M.A.

*Hon. Secretary*—R. R. Archibald, M.A., The Union.

*Hon. Treasurer*—Allan F. Baird.

*Assistant Secretary and Treasurer*—George Fletcher, M.A.

*Librarian*—Clark Nicholson, M.A.

*Convener of Games Committee*—William Stevenson.

*Committee of Management*—The Office-bearers ; A. J. Fleming, LL.B. ; D. A. Dick, M.A. ; D. H. Wilson, M.A. ; J. I. Greig, M.A., B.Sc., M.B., Ch.B. ; R. H. Napier, M.A. ; R. M. Grant, M.A. ; J. Mowat ; A. Dick ; C. P. Williamson ; R. E. Lee, M.A.

*Former Presidents of the Union.*

1890. John H. Harley, M.A.	1899-1900. George F. Buchan, M.B.
1890-1. Robert G. Bell, M.D.	
1891-2. John Paterson, M.A., M.B.	1900-1. Ivy M'Kenzie, M.A., B.Sc., M.B.
1892-3. F. A. Macquisten, B.L.	
1893-4. Joshua Ferguson, M.A., M.B.	1901-2. Andrew F. Bell, M.B.
1894-5. Joshua Ferguson, M.A., M.B.	1902-3. G. D. Valentine, LL.B.
1895-6. J. A. Stokes Little, M.A.	1903-4. C.M. Drew, M.A., M.B.
1896-7. W. C. Henderson, M.A., B.Sc. (resigned Oct., 1896).	1904-5. D. J. M'Leish, M.A., B.Sc., M.B. (resigned Oct., 1904).
1896-7. A. M. Seott, M.A.	1904-5. J. I. Greig, M.A., B.Sc., M.B.
1897-8. John C. Monteith, M.A.	1905-6. John M. Miller.
1898-9. William F. Smillie.	1906-7. C. P. Williamson.

#### THEOLOGICAL SOCIETY.

The object of the Society is to discuss, by means of essays and debates, theological and ecclesiastical questions. The membership of the Society is open to all students attending the Divinity Hall of the University : but all matriculated Students in faculties other than the Faculty of Theology are eligible for extraordinary membership.

*Office-Bearers for 1907-8.*

*Honorary President*—Israel Abrahams, M.A., Reader in Rabbinical and Talmudic Literature at Cambridge University.

*President*—W. N. Bell, M.A.

*Vice-President*—Neil M'Caig, M.A.

*Secretary*—T. F. H. Graham, M.A., 11 Wilson Street, Glasgow, W.

*Treasurer*—James Macmorland, M.A.



*Committee.*

A. C. Baird, M.A., B.Sc.

J. Middleton, M.A., LL.B.

J. M. Hunter, M.A.

M. Stewart, B.A.

(With two students of the first year in Divinity to be elected in October.)

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## GLASGOW UNIVERSITY MEDICO-CHIRURGICAL SOCIETY.

(Founded 1802.)

This Society has as its principal object the prosecution of medical study by essays, debates, lantern and microscopical demonstrations, and during the summer by visits to Institutions and other places of interest to medical students.

All medical Students and medical Graduates of less than one year's standing are eligible for Ordinary Membership, on payment of the annual subscription of One Shilling and Sixpence. All who at the close of their last winter's session shall have been members for two years, may become Life Members on payment of Five Shillings.

Meetings of the Society are held in the Union on Friday evenings during the winter session.

*Office-Bearers for 1907-8.*

*Honorary President*—Principal MacAlister, M.A., M.D., LL.D.

*President*—R. M. F. Picken, B.Sc.

*Vice-President*—Hugh C. Storrie.

*Honorary Secretary*—W. Rutherford.

*Minute Secretary*—W. C. Mackay.

*Treasurer*—J. Lang Cochrane.

*Demonstrator*—William W. Rorke.

*Librarian*—K. C. Middlemiss.

*Committee.*

A. Patrick.

J. Allan.

A. Turnbull.

J. J. Sinclair.

C. L. Sutherland.

J. Dunlop.

J. Girven.

D. S. Brough.

Also two members to be appointed in November.

Books are given out at the ordinary meetings, or on written application to the Librarian.

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## DIALECTIC SOCIETY.

(Established 1862.)

The Society meets weekly in the Union Debating Hall during the Session for the discussion of Literary, Philosophical, and Political subjects.

All matriculated men Students are eligible for Ordinary Membership.

The Annual Subscription is One Shilling and Sixpence. (Members of the Union One Shilling.)

*Honorary President.*

W. Macneile Dixon, Litt.D., Professor of English Language and Literature.

*President*—R. F. Rattray.

*Vice-Presidents.*

*Senior*—R. M. Mathams.

*Junior*—H. J. Paton.

*Secretaries.*

*Senior*—G. S. Fraser, M.A., 53 Queen Mary Avenue, Crosshill, Glasgow. } *Junior*—A. G. Young.

*Treasurer*—R. Gibson.

*Macer*—N. V. Lothian.

*General Board.*

H. F. Martin.

J. G. Ritchie.

H. W. Saunders.

T. D. M. Latta, M.A.

J. Keith, M.A.

R. P. Thomson, M.A.

G. Barelay.

B. I. Macalpine.

GLASGOW UNIVERSITY ORIENTAL SOCIETY.

(Instituted 1880.)

The object of the Society is the study of the languages and literatures of the East.

All Students of Oriental languages are eligible for election to the membership.

The Society meets twice a year—in the months of April and October.

*Office-Bearers.*

*President*—Rev. Professor James Robertson, D.D.

*Vice-President*—Robert B. Pattie, B.D.

*Corresponding Secretary*—Rev. James Young, B.D.

*Recording Secretary*—Rev. George Anderson, B.D.

*Treasurer*—Rev. Robert Gardner, B.D.

GLASGOW UNIVERSITY ALEXANDRIAN SOCIETY.

This Society was formed in January, 1887. It has for its chief object the discussion of questions connected with the literatures of Ancient Greece and Rome. The membership is open to Members of the University. Any distinguished Scholar or any Member of the University of five years' standing, or any person officially connected with the University, is eligible for Honorary Membership.

*Office-Bearers.*

*Honorary Presidents.*

Professor J. S. Phillimore, M.A.

Professor W. M. Dixon, Litt.D.

Professor G. A. Davies, M.A.

Emeritus-Professor Ramsay, LL.D.

*President*—J. L. Morison, M.A.

*Vice-Presidents* } R. M. Mathams.  
                          { H. J. Paton.

*Secretary*—R. G. McDowall.

*Treasurer*—E. Evans.

*Committee.*

R. Gibson.

J. B. Hutton.

G. A. Johnston.

H. F. Martin.

B. K. N. Wyllie.

And one to be elected at the beginning of Session 1907-8.

#### GLASGOW UNIVERSITY PHILOSOPHICAL SOCIETY.

(Instituted 1887.)

This Society was instituted for the promotion of Philosophical Discussion and Investigation. It meets on alternate Wednesday Evenings at Eight o'clock during the Winter Session, in the Union. Ordinary Membership is open to all students who have attended or are attending Philosophical Classes in any University. The annual subscription is one shilling for those who join through the Union, and one shilling and sixpence for those who do not.

*Office-Bearers for Session 1907-8.*

*Honorary President*—Professor A. C. Bradley, LL.D.

*Honorary Vice-Presidents.*

The Principal,	} <i>Ex-Officiis.</i>
Professor Jones, LL.D.,	
Professor Latta, D. Phil.,	
Professor Dixon, Litt.D.	

*President*—John W. Scott, M.A.

*Vice-President*—Hugh A. Reyburn.

*Secretary and Treasurer*—Archibald A. Bowman, M.A., 26 Sutherland Terrace.

*Members of Committee.*

Messrs. Payne, Gunnison, Russell, Henderson, and Paton.

#### GLASGOW UNIVERSITY HISTORICAL SOCIETY.

This Society has for its aim the stimulation of interest in the study of History among the students of Glasgow University. Its membership, however, is not confined to matriculated students but extends to all members of the University and to others not connected with College, who may make their desire to join known through members of the Committee.

The annual subscription is one shilling.

*Office-Bearers for Session 1907-8.*

<i>Presidents</i> }	Professor Medley.
	The Rev. Professor Cooper.
	Dr. W. S. M'Kechnie.

*Secretary and Treasurer*—John L. Morison, M.A., The University.

*Committee.*

From the Staff—Kenneth K. M. Leys, B.A. From Q.M. College—Misses M. M. Gray, Reid, A. M. W. Renwick, and M. E. Watson. From the University Students—Messrs. H. Cook, J. M'Beath, D. N. Strathie, and A. D. Hareus. From Senior Members—Misses Milligan and Waddell.

GLASGOW UNIVERSITY ENGINEERING SOCIETY.

(Instituted 1891.)

The objects of this Society are the promotion of the study of Engineering and the Diffusion of Engineering information among the members, by the reading of papers, by discussions, by visits to Engineering works in progress, and by such other means as the Society shall approve.

The membership is open to all past and present Students of the University.

*Office-Bearers for Session 1906-7.*

*Honorary President*—John Ward, Esq.

*Honorary* { Professor Archibald Barr, D.Sc., M.Inst. C.E.

*Vice-Presidents*— { Professor J. H. Biles, LL.D., M.I.N.A.

*President*—John S. Nicholson, B.Sc.

*Vice-Presidents*— { J. G. Johnstone, B.Sc., A.M.I.N.A.  
 { H. Bamford, M.Sc.

*Secretaries*— { Charles McNeil, B.Sc., 1 University Gardens.  
 { Thomas Buchanan, James Watt Laboratories.

*Treasurer*—Philip de Havilland Hall.

*Minute Secretary*—Alexander Gordon.

*Committee.*

*Engineering.*

Hubert N. Beilby, B.Sc.  
A. Gordon.  
N. J. Maclean, B.Sc.

*Naval Architecture.*

Ernest W. Russell.  
W. S. Owen.

GLASGOW UNIVERSITY PHYSICAL SOCIETY.

This Society was founded in 1884 "for the discussion of scientific subjects in general, and the diffusion of scientific information among its members, by special communications, and any other means which the Society may from time to time approve."

Meetings are held during the Winter Session on alternate Wednesdays at 3.45 P.M. The syllabus for the year is issued in autumn, and may be had from the Secretary after the commencement of the Winter Session.

All past and present students of the University who are interested in Physical Science, and others whose membership the council think would be desirable, are eligible for membership. It has been decided that Tea shall be provided at every meeting in the ensuing year. The subscription for the ensuing year has been fixed at Two Shillings and Sixpence.

*The Office-Bearers are:—*

*Honorary President*—Lord Kelvin, G.C.V.O., F.R.S.

*President*—Professor Gray, LL.D., F.R.S.

*Vice-President*—Robert A. Houstoun, M.A., B.Sc., Ph.D.

*First Secretary*—John Jackson.

*Second Secretary*—James B. M'Vail.

*Treasurer*—Margaret B. Moir.

Letters should be addressed to the Secretary of the Society at the Physical Laboratory.

GLASGOW UNIVERSITY CHORAL SOCIETY.

The object of this Society is to promote Choral Singing in the University. All past and present students are eligible for membership. Non-Students may be admitted by election.

Provision is made for Honorary membership on payment of annual subscription of 10s., which will guarantee three tickets for each concert to each Honorary Member.

*Office-Bearers for 1907-8.*

*Honorary President*—Principal MacAlister.

*President*—A. M. Henderson, *University Organist*.

*Secretary*—John C. Kinnear.

*Committee.*

A. D. Hareus.

R. E. Lee, M.A.

J. M. Rorke.

E. L. Gueritz, M.A.

H. W. Saunders.

Miss Clara Jeffries.

Miss Lowe.

Miss B. Thomson.

Miss H. Thomson.

Miss K. Mollison.

One Honorary Member to be on Committee.

GLASGOW UNIVERSITY MISSIONARY SOCIETY.

(Instituted 1821.)

*Office-Bearers for 1907-8.*

*Honorary President*—Rev. John Hunter, D.D.

*President*—R. H. Napier, M.A.

*Vice-President*—W. D. Macgill, M.A.

*Superintendents of Home Missions*— $\left\{ \begin{array}{l} \text{W. M. Milne, M.A.} \\ \text{Stephen Forsyth, M.A.} \end{array} \right.$

*Senior Secretary*—John M. Hunter, M.A., 62 Church Street, Ayr.

*Junior Secretary*—William Whitehead, M.A., Port-Glasgow.

*Librarian*—Andrew Templeton, M.A.

*Treasurers*— $\left\{ \begin{array}{l} \text{A. C. Baird, M.A., B.Sc. (Senior).} \\ \text{John A. Steele, M.A. (Junior).} \end{array} \right.$

*Summer Committee.*

The Office-bearers and Messrs. J. C. M. Fairlie, B.D., J. H. Cockburn, B.D.,  
and W. J. Smith, M.A.

*Members of Committee.**From Theology—*

R. Napier Bell, M.A.  
William Potter, M.A.  
James MacMorland, M.A.  
R. S. Armstrong, M.A.  
Alex. Silver.  
R. A. Orr.

*From Arts—*

A. Currie.  
J. C. Fairlie.  
J. Millar.

*From Law—*

James S. Quig.  
Joseph Davidson.

*From Medicine—*A. G. Geyer and Aidan G. W. Thomson.

Three Representatives from First Year Theology to be appointed in November.

## GLASGOW UNIVERSITY CHRISTIAN UNION.

The object of this Society is the promotion of religious life and fellowship at the University.

The headquarters of the Union are at 65 Bank Street, where there are carried on weekly Bible-reading circles and daily Prayer Meetings. Other features of the work are: Monthly addresses by well-known preachers and meetings for the Study of Missionary and Social Problems.

*Office-Bearers.*

*Hon. President—*Principal MacAlister, M.A., M.D., D.C.L., LL.D.

*Hon. Vice-President—*David K. Picken, M.A.

*President—*B. I. Macalpine.

*Vice-President—*David Yellowlees.

*General Secretary—*George Barclay, 6 Spring Gardens, Kelvinside.

*Assistant Secretary—*Geo. D. Henderson.

*Missionary Secretary—*W. Boyd Henderson.

*Bible-circle-Secretaries—*

*Arts:* A. M. Stevenson. *Medicine:* Henry Yellowlees.

*Prayer Meeting Secretary—*R. H. Napier, M.A.

*Treasurer—*H. C. D. Rankin.

*Committee.*

D. W. MacKeith.

George A. Johnston.

James Cairns.

## GLASGOW UNIVERSITY STUDENTS' SETTLEMENT SOCIETY.

This Society was founded in 1889 with the object of carrying on social, educative, and religious work.

The Settlement, consisting of residence, club-rooms, and halls, is situated at 10 Possil Road, Garscube Cross. The work takes various forms, including social clubs, Sunday meetings, a "Poor Man's Lawyer," a Medical Dispensary, and Savings Bank. In the residence

there is accommodation for fifteen students, and those who desire to enter into residence should communicate at the beginning of the session with the Warden or Secretary.

*Office-Bearers.*

*President and Warden*—James Cunnison, M.A.

*Secretary*—John S. Boyd, 10 Possil Road, Glasgow.

*Sub-Warden*—J. W. Pratt.

*General Committee.*

John W. Scott, M.A.

Ian O. Neilson, M.A.

Kenneth K. M. Leys, B.A.

William Boyd, M.A., B.Sc.

*Finance Committee.*

Prof. Henry Jones, LL.D.

Rev. D. Kirkwood, B.D.

R. Harvie Pirie, LL.B.

David Yellowlees, M.D., LL.D.

John S. Boyd.

GLASGOW UNIVERSITY TEMPERANCE SOCIETY.

The object of this Society is to unite those students in the University who are interested in the cause of Temperance and are anxious to work for its advance. This work it seeks to accomplish among the students by means of At Homes, Lectures, etc., while, outside the University, it carries on successful Temperance Mission Work by Concerts at the Students' Settlement, and by Children's Play Evenings at Oakbank Public School.

*Office-Bearers for 1907-8.*

*Honorary President*—John L. Morison, M.A.

*Honorary Vice-Presidents.*

Prof. Geo. A. Gibson, LL.D.

A. Cameron Corbett, M.P.

James Carslaw, M.A., M.B.

Prof. Macphail, M.B.

A. Bonar Law, M.P.

Robert D. Bell, M.A., M.B.

Miss Galloway, LL.D.

Miss Mackie.

*President*—Wilfred L. Marsh.

*Vice-President*—Miss Armour, M.A.

*Secretary (pro tem.)*—A. D. Hareus, the Union.

*Treasurer*—J. Cairns, 12 Holyrood Crescent.

*Committee.*

*Arts—*

W. McLean.

P. C. Millar.

G. A. Harvie.

L. Levine.

A. C. Strathie.

*Science—*

M. MacGregor, M.A.

*Medicine—*

John Mowat.

J. Hislop.

John Lang.

From Queen Margaret College—Miss Borthwick, Miss MacNeilage, Miss Macintosh, Miss Cowan, Miss Henderson, Miss Ramsay, and Miss J. C. Robertson.

## GLASGOW UNIVERSITY '88 MEDICAL CLUB.

The purpose of this Club is to encourage social intercourse among those who studied Medicine at Glasgow University in the years 1884-1888. A Triennial Dinner is held, and communications are addressed at that time to the Members of the Club in all parts of the world.

*Office-Bearers for 1905-1908.*

*Chairman*—R. M. Buchanan, M.B., C.M.

*Secretary*—T. K. Monro, M.A., M.D., 12 Somerset Place, Glasgow.

*Committee.*

John Adams, M.B., C.M.  
T. C. Barras, M.B., C.M.  
J. P. Boyd, M.B., C.M.  
Andrew Davidson, M.A., M.D.  
J. M'C. Johnston, M.A., M.D.  
A. Brown Kelly, D.Sc., M.D.  
H. L. G. Leask, M.D., C.M.

R. B. Lothian, M.B., C.M.  
J. Wyllie Nicol, M.B., C.M.  
L. R. Oswald, M.B., C.M.  
C. E. Robertson, M.D., C.M.  
John Rowan, M.B., C.M.  
Wm. Roxburgh, M.D., C.M.  
John Wright, M.B., C.M.

## GLASGOW UNIVERSITY '93 CLUB.

The object of the Club is to promote intercourse among the Members by means of at least one annual reunion which shall be held as far as possible on the Friday before Christmas. The Membership is limited to students of the University of the session 1892-93.

*Office-Bearers for 1907.*

*President*—Rev. Robert Wiseman.

*Vice-Presidents*—(J. J. Bell.  
(Thomas Carruthers, M.A., M.B., Ch.B.

*Secretary and Treasurer*—Robert W. McClure, B.L.,  
136 Wellington Street, Glasgow.

*Committee.*

A. H. Charteris, LL.B.  
J. Roy Tannahill, M.B., Ch.B.  
Rev. A. Wylie Blue.

Rev. Campbell Taylor, M.A.  
William Scott, M.A.  
J. C. Scott, M.A.

## GLASGOW UNIVERSITY TWENTIETH CENTURY (ARTS) CLUB.

Membership of this Club is limited to (a) Students of the Moral Philosophy and English Literature Classes during the session 1900-1901, (b) Graduates in Arts of the year 1901, (c) elected Members.

The object of the Club is to encourage and perpetuate by social intercourse friendships formed during the College career, and to keep Members in touch with their Alma Mater. The Club at present consists of 122 Members, and there is at least one annual meeting.



*The Office-Bearers for Session 1907-1908 are :*

*Honorary Presidents*—{ Rev. Principal Lindsay, D.D., LL.D.  
Professor Glaister, M.D.

*President*—John F. Horn, M.A.

*Vice-Presidents*—{ R. Ralston Ness, LL.B.  
R. C. Young, M.A.

*Secretary and Treasurer*—Rev. Gordon Quig, B.D.,  
Corkerhill, by Govan, Glasgow.

*Committee.*

Rev. John Chambers. | J. M. Fleck, M.A.  
Rev. George Muir, B.D.

#### GLASGOW UNIVERSITY—NEW CENTURY LAW CLUB.

The object of the Club is to promote friendly intercourse among the Students of Law, by holding at least two social functions in the year.

All Students attending any of the Law Classes in the Glasgow University during the Sessions of 1900 to 1901, and 1901 to 1902, are eligible for Membership on payment of the annual subscription of One Shilling.

*Office-Bearers.*

*Honorary Presidents.*

Charles Scott Dickson, K.C.

John Boyd, Advocate, Sheriff-Substitute for Lanarkshire.

Professor William M. Gloag, B.A., Advocate, } *ex officio*.  
Professor James Moir, LL.D., }

*President*—George D. Valentine, LL.B., Advocate.

*Vice-Presidents*—{ James Auld.  
Weir Grieve, M.A.

*Secretary and Treasurer*—David Ross, Jr.,  
2 Carlton Terrace, Kelvinside, North, Glasgow.

*Committee.*

Wm. Boyd Berry, LL.B.  
Wm. E. Cameron, LL.B.  
John A. Gulliland.  
Alexander G. Kemp.

Wylie R. McIntyre.  
Ed. Rosslyn Mitchell, LL.B.  
George J. Spreull, LL.B.  
David Wilson.

#### GLASGOW UNIVERSITY OSSIANIC SOCIETY.

(Instituted 1828.)

The object of the Society is the discussion of subjects bearing on the language, literature, and customs of the Highlands. It meets in the Union on Friday evenings at seven during the winter session. All

meetings are conducted in English with the exception of four, two of which are purely Gaelic, and two composite. Ordinary membership is open to all students, both men and women, interested in the Highlands.

*Office-Bearers for Session 1906-7.*

*Honorary President*—Professor Cooper, D.D.

*President*—Neil A. M. Johnson.

*Gaelic Vice-President*—R. C. Robertson.

*English Vice-President*—J. Macdonald Ross, M.B.

*Secretary*—J. J. Mackintosh.

*Assistant-Secretary*—M. M. Macrae.

*Treasurer*—D. M'Intyre.

*Bard*—Archibald Campbell.

*Representative to Union*—F. A. Stenart.

*Members of Committee.*

Messrs. Campbell and Leitch, and Miss MacKinnon.

With two members to be elected from first year's students in November.

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#### THE CHURCH OF SCOTLAND UNDERGRADUATE SOCIETY.

The Society meets every Monday at 7.30 p.m. in the Union for the discussion of literary, social, and religious topics, and for the promotion of social intercourse among its members.

All undergraduate students connected with the Church of Scotland are eligible for membership. An undergraduate shall mean a student in any Faculty who has not graduated in that Faculty.

The annual subscription is one shilling for Union members and one shilling and sixpence for non-Union members.

*Office-Bearers for 1907-08.*

*Honorary President*—Principal MacAlister, M.A., M.D., D.C.L., LL.D.

*President*—R. M. Mathams.

*Vice-President*—T. F. H. Graham, M.A.

*Secretary*—G. D. Nisbet, Woodside, New Abbey, Dumfries.

*Treasurer*—A. Macdonald.

*Committee.*

Messrs. Robert E. Lee, M.A., J. O. Taylor, D. Bennett, W. S. Buchan, with one student in the Faculty of Arts and two from the other Faculties to be elected in October.

## GLASGOW UNIVERSITY UNITED FREE CHURCH STUDENTS' SOCIETY.

(Instituted 1845.)

*Honorary President*—Rev. Alexander Whyte, D.D., Edinburgh.*President*—Matthew V. Baird.*Vice-Presidents*—Alex. T. R. Yuille, Joseph Gray, M.A.*Secretary*—J. A. M'Robert, 12 West Cumberland Street.*Treasurer and Recording Secretary*—Roger G. M'Dowall.*Editor of Magazine*—George A. Johnston.*Committee.*

D. W. Semple, J. W. T. Dickie, S. W. Wilson, A. R. H. Geyer.

With one student from the first year to be elected in October.

This Society meets every Saturday at 10 a.m. in the Union. It is one of the oldest in connection with the University, having attained its Diamond Jubilee.

The objects of the Society are the promotion of social intercourse and the furtherance of moral and intellectual culture among its members.

All Students attending the University in any Faculty, who are connected with the United Free Church, are eligible for membership, which is obtained by the payment of the annual subscription of One Shilling and Sixpence. Students not connected with the above Church may become Associates.

## GLASGOW UNIVERSITY ATHLETIC CLUB.

*Office-Bearers for 1906-7.**Honorary President*—Professor Medley, M.A.*Hon. Vice-Presidents*—Professor Bower, Dr. M'Vail, Dr. John F. Fergus, Sir William R. Copland, LL.D., Messrs. Hugh Hutchison,

D. T. Gwynne-Vaughan, and Allan F. Baird.

*President*—Hugh G. Wilson.*Hon. Treasurer*—Dr. W. H. Lang.*Hon. Secretary*—J. W. M'Leod, The Union.*Committees of Sections—*

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*Golf*—Professor Stockman (Captain), A. J. Hutton, R. K. Paton, Dr. G. H. Clark, H. G. Robinson (Match Secy.), Dr. F. J. Charteris, and J. K. Dunlop, M.A. (Joint-Secretaries).

*Hockey*—G. M. Sichel (Captain 1st XI.), J. Gray, M.A. (Captain 2nd XI.), J. P. Mathie, A. B. Harper, G. A. Peck, and W. A. Maclean, M.A. (Secy.)

*Cricket*—A. Patrick, M.A. (Captain), John L. Morison, M.A. (Vice-Captain), A. M. Stevenson, W. M. Elliott, and A. C. Strathie (Secy.).

*Sports*—A. M. Stevenson (Convener), William C. Mackie, J. M. Walker, Dr. W. H. Lang, A. M'Donald, and J. W. Macleod.

*Executive Committee.*

The Officials, Secretaries of Sections, with G. S. Milne  
and W. L. M'Lean.

The object of the Club is the promotion of all forms of Athletic exercise. The Membership is confined to present and past Students of the University.

Subscriptions: Athletic Club, Two Shillings and Sixpence, and in addition as follows: Rugby Football, Seven Shillings and Sixpence; Fives Club, Three Shillings; Golf Club, Three Shillings and Sixpence; Cricket, Four Shillings; Hockey, Ten Shillings.

Inclusive Subscription, One Guinea.

THE UNIVERSITY COMPANY (K) 1ST L.R.V.

During session 1903-4 the old University Volunteer Company in connection with the First Lanark Rifles was revived, and at present in addition to non-University members the Company has between 70 and 80 students or ex-student members. Special terms of joining are offered to University students, whereby men require to sign on only for two years, and drills are arranged to suit students' class hours. Joining the company therefore involves (1) Recruit drills (twenty double drills) which Cadet Corps members need not perform if they have drilled on 40 occasions the season previous; (2) Ten drills with musketry practice for the second and subsequent years; (3) A camp attendance once in two years. The subscription is five shillings per annum. Details may be had from the O.C. K Company, Captain G. L. Hill, 4 Thornwood Terrace, Partick, Lieutenant Morison, The University, or Col. Sergt. G. D. Smith, 10 Park Avenue.

GLASGOW UNIVERSITY RIFLE CLUB.

*President*—Principal MacAlister, M.A., M.D., D.C.L., LL.D.

*Vice-Presidents*—Sir John Stirling Maxwell, Bart., Professor Bower, and Colonel Reid, LL.D.

*Team Captain*—P. F. W. Edington, B.L. (Lieut., 1st L.R.V.),  
157 West George Street.

*Vice-Captain*—F. W. Heys (Capt., 3rd Renfrew).

*Secretary and Treasurer*—Lieut. J. L. Scott, The Union.

*Students' Convener*—

*Committee*—William Nelson (Major, 1st L.R.V.), Messrs. H. F. Martin and D. J. Wallace, M.A.

Its objects shall be to promote rifle shooting among students and ex-students of Glasgow University, and to provide the means of having Glasgow University well represented, by a team consisting of five students and five ex-students, in the annual match for the Inter-University Trophy.

Glasgow University won the Trophy last year with a total of 892 points, Aberdeen being second with 881 points, and Edinburgh third with 869 points. Glasgow was represented by the following team at Aberdeen :

*Ex-students*—Messrs. Edington, Coats, M'Phie, Darling, and Skilling.

*Students*—Messrs. Barker, Scott, Drummond, Mackay, and D. J. Wallace, M.A.

All students and ex-students of Glasgow University shall be eligible as Patrons and Ordinary Members. All persons officially connected with the University shall be eligible as Patrons. Both classes of Members may take part in the competitions.

All persons, eligible as above, subscribing 10s. or upwards annually, shall be *ipso facto* Patrons. The subscription for Ordinary Members shall be 5s. for ex-students, and 2s. 6d. for present students, all payable by 1st March annually. These annual subscriptions may be commuted by a present payment of £3 3s., entitling the person paying to become a Life Patron.

#### GLASGOW UNIVERSITY CLUB, LONDON.

The objects of the Club are to maintain good fellowship among its members and so promote the interests of the University of Glasgow and of higher education in connection therewith.

Graduates, and all who are or have been students of the University of Glasgow, or officially connected with it, are eligible for membership.

*Office-Bearers for 1907-1908.*

*President*—

The Right Honourable Lord Kelvin, O.M., G.C.V.O., F.R.S., D.C.L., LL.D., Chancellor of the University.

*Vice-Presidents*—

The Right Honourable Lord Balfour of Burleigh, K.T.	Professor A. C. Bradley, M.A., LL.D.
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Professor John M. Thomson, F.R.S.	Sir Henry Craik, K.C.B., LL.D.
The Right Honourable James A. Campbell, LL.D.	Sir William Taylor, K.C.B., LL.D.

*Council—*

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Guthrie Rankin, M.D., M.R.C.P.	And. Wylie, M.D.

*Honorary Treasurer—*W. Walton Don, M.D., 200 Sutherland Avenue, W.

*Honorary Secretaries—*

C. O. Hawthorne, M.D., M.R.C.P., 63 Harley Street, Cavendish Square, W.

William Craig Henderson, M.A., D.Sc., 2 Paper Buildings, Temple, E.C.

## GLASGOW UNIVERSITY '99 CLUB.

As the "Constitution" of the above Club indicates, its function or office is "to promote social unity among its members by forming new friendships, or by perpetuating those formed during College career."

Matriculated students of Session '98-'99 are eligible for membership.

*Office-Bearers 1907-1908.*

*Honorary Presidents—*Professor Jones, Professor Dixon.

*President—*A. B. Mackay, LL.B.

*Vice-President—*W. F. Cameron, LL.B.

*Secretary and Treasurer—*

Ronald Lean, 12 Hampden Terrace, Mount Florida.

*Committee—*

N. C. Anderson, LL.B., A. Haddow, M.A., J. Scurymgeour, M.A., B.L.

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<i>Practical do.</i>	- 9 A.M. till 6 P.M.	
<i>Physics</i> —Mon., Wed., Thur., and Fri.,	10 A.M.—	PROF. PETER BENNETT.
<i>Chemistry</i>	- - - 9 A.M.	} PROF. J. ROBERTSON WATSON, M.A., and Assistants.
<i>Chemical Laboratory</i>	- 10 A.M. till 6 P.M.	
<i>Botany</i>	- - - 3 P.M.—	PROF. B. G. CORMACK, M.A., B.Sc.
<i>Zoology</i>	- - - 12 NOON.—	PROF. G. BELL TODD, M.B.
<i>Physiology</i>	- - - 12 A.M.—	PROF. ROBERT FULLARTON, M.A., M.B.
<i>Material Medica and Therapeutics</i>	- 1 P.M.—	PROF. J. P. DUNCAN, B.Sc., M.B.
<i>Medical Jurisprudence &amp; Hygiene</i>	Summer.	} PROF. CARSTAIRS DOUGLAS, D.Sc., M.D.
<i>Public Health Laboratory</i>	- as arranged.	
<i>Surgery</i>	- - - 12 NOON.—	PROF. JAMES H. NICOLL, M.B.
<i>Practice of Medicine</i>	- - - 1 P.M.—	PROF. JOHN COWAN, D.Sc., M.D.
<i>Midwifery</i>	- - - 2 P.M.—	PROF. JOHN EDGAR, M.A., B.Sc., M.B.
<i>Laryngology</i>	- - - 3 P.M.—	JOHN MACINTYRE, M.B., F.R.S.E.
<i>Aural Surgery</i>	- - - Tues., 3 P.M.—	JAMES GALBRAITH CONNOL, M.B.
<i>Ophthalmic Medicine &amp; Surgery</i>	Thur., 4 P.M.—	T. SPENCE MEIGHAN, M.D.
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<i>Practical Anatomy</i>	- 6 A.M. till 6 P.M.	<i>Medical Jurisprudence and Hygiene</i>	- - - 12 NOON.
<i>Practical Chemistry</i> —		<i>Public Health Lectures</i>	- as arranged.
<i>Demonstrations</i>	11.10 A.M. and 3 P.M.	<i>Practice of Medicine</i>	- as arranged.
<i>Laboratory</i>	- 9 A.M. till 6 P.M.	<i>Operative Surgery</i>	- - - 11 A.M.
<i>Botany</i>	- - - 9 A.M.	<i>Aural Surgery</i>	- - - Tues., 3 P.M.
<i>Practical Botany</i>	- - - 10 A.M.	<i>Diseases of Women and Children</i>	2 P.M.
<i>Zoology</i>	- - - 12 NOON.		
<i>Practical Zoology</i>	- - - 1 P.M.		
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